

apc

HIGH-PERFORMANCE COMPUTING JUNE 2006

ADSL2+ MODEMS MEGATEST

Tested at 1km, 3.5km and 6km from the exchange

**SUPERFAST
BROADBAND**

apc 7 CDs' worth of software on DVD



**FREE TRAINING
FROM LEARNKEY**

PART ONE

DATABASE PROGRAMMING

On DVD and online — requires net connection

3D HOME ARCHITECT HOME DESIGN



Plan and design renovations
or your dream house — view
in 3D and print blueprints



**Full
Version**

JUST RELEASED

FEDORA CORE 5

The latest, complete release
of this leading Linux distro

For x86. Requires CD burner
to create install CDs.

**Full
Version**

**FULL Distro
3GB**

MASTERPLAN PROFESSIONAL 6

Get professional
with business and
marketing plans

Free online registration required.
Credits not available for financial support.

**Full
Version**

**apc
EXCLUSIVE**

**FOUR-MONTH TRIAL
B-FREE PERSONAL 4.03**

Take control of your personal finances

Requires a valid internet connection, requires a valid PC with Windows XP or Vista

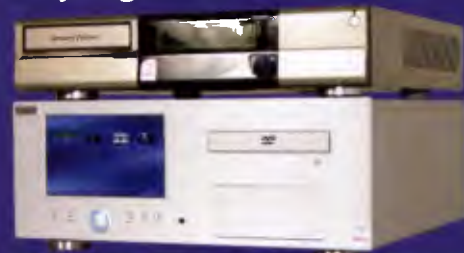
HUGE CHANGE FOR PCs

The key techs set to change
the PC forever



THE FIRST VIIV PCs TESTED

We've figured out what
they're good for!



WORKSHOPS

- Supercharge XP with Microsoft's latest free PowerToys
- Build a site with Joomla's content management system — New Series



**GALACTIC
CIVILIZATIONS II:
DREAD LORDS**

PLAYABLE DEMO

Use of this disc and its content is subject to the disclaimer on the back of this case and on the DVD, and any applicable third party licence terms.

Print Post Approved
PP25500300559

\$9.95 inc GST
NZ \$10.00 inc GST
ISSN - 0725-4415

apc magazines



9 313006 001362

06



Anyone play 'Monkey Island'?

Get up to 21GB[#]
for \$49.95⁺ a month.

Optus Broadband is not available in Tasmania or the Northern Territory.



Important information: *Minimum total cost over 24 months for Optus Broadband (\$49.95 plan, \$0 connection, \$0 modem and payment by direct debit) plus Budget LineSaver or 'yes' Plan 25 Mobile plan is \$1845.60 or \$1798.80 (respectively) plus call costs. Offer available only to new residential customers who sign up to Optus Broadband between 1 April and 31 May 2006. This offer cannot be combined with any other offer unless specified. **Optus Broadband** services are not available to all homes, or in NT and TAS. ***Downloads:** Consists of 7GB of standard \$49.95 data allowance plus 14GB of bonus 'yes' Data allowance. 'yes' Data can be used between 12 midnight and 12 midday (AET - Sydney Time). Please note: once standard monthly Data Allowance is reached, customers will be speed limited until the start of the next billing month and will no longer be eligible for bonus 'yes' Data for the remainder of that month. ***30-Day Trial:** Customers must ring Optus to request a waiver of the

Get a lightning-fast 1.5Mbps connection, along with a fat download limit when you connect to Optus Broadband's \$49.95+ per month plan (when combined with Optus Home Phone or eligible mobile plan for 24 months).

Plus, with our \$0 installation^ offer and 30-day trial* period you can try us,
and if Optus Broadband isn't for you, we'll waive the cancellation fee.

\$0 INSTALLATION^
(\$0 connection + \$0 modem)



30-DAY TRIAL*

Whether it's for your favourite RPG, handing out the frags online or simply downloading the latest movies and games (and the inevitable patches), Optus Broadband gives you the room to do whatever you want online.

Here's what you get:

- Downloads of up to 21GB (7GB midday-midnight plus 14GB midnight-midday)*
- No excess usage fees~ ■ Free technical support 24/7 ■ Free spam filter



CALL 1800 200 808
optus.com.au/broadband



ALLPHONES



KYDA.com

cancellation fee within 30 days of activation or a \$300 pro rata cancellation fee will apply. Modems provided by Optus at no charge must be returned or a \$99 modem fee will apply. One 30-Day Trial offer per customer or phone number. Offer does not apply to associated services such as home phone or mobile service. Offer available only to new customers who sign up to Optus Broadband between 1 April and 31 May 2006. Optus reserves the right to quote for non-standard installations. **Optus Cable:** For \$0 connection, Optus must receive a valid direct debit application form within 6 weeks of installation. A \$30 direct debit rebate will then be applied. ^\$0 Installation: Optus reserves the right to quote for non-standard installations. ~Speed limiting may apply. **General:** Early disconnection fees apply. For full details, see www.optus.com.au/optusnet. Information correct as at 6th April 2006. SingTel Optus Pty Limited. ABN 90 052 833 208.

OPT8148/APC

Contents

JUNE 2006



WIN A NEW BROTHER MFC

Take out a 12-month subscription to APC for \$79.95 and get the chance to win 1 of 3 Brother Colour Laser Multi-Function Centres valued at \$1599 each. Valid until 13 June 2006. Page 34.

16 | PC CHANGES AHEAD

What's in store for the humble PC?

38 | FIRST TEST: VIIV PCs

Nick Race puts 'em through their paces.



ADSL2+ modems megatest

Dan Warne roadtests 23 ADSL2+ modems at ISP Internode's testing facilities in South Australia.

52

technotes

Editorial	Editorial and staff file	6
Technotes	All the latest news	9
Feature	Your PC in 2007	16
Feature	The Creators: Andrew Tridgell	20
Feature	Scamming the scammer	22
Feature	A choice IT setup for a small business	94

opinion

Opinion	Linux Window	24
Opinion	Hasta la Vista	26
Opinion	End user	28

feedback

Watchdog	Customer service issues	30
Opinions	Readers' letters	32

apc labs

Intro	John Gillooly has his say	36
Reviews	SAS tech: Adaptec, Maxtor, Seagate	37
	Canon MV960	40
	Pioneer DreamBook Tough 220	40
	Nvidia GeForce 7600 GT	42
	ASUS PW191	42
	Gigabyte 8I945GMH-RH Viiv Edition	44
	Netgear RangeMax 240 Router	44
	Brother MFC-640CW	45
	ACDSee Pro Photo Manager	45
	Samsung YP-Z5 MP3 Player	46
	Xbox 360 Controller for Windows	46
	Topfield TFP20 Portable Media Player	48
	Sorenson Squeeze 4	48
	PHP Designer 2006 — Beta	50
	BlueJ 2.1.2	50
	IPCop vs Smoothwall Express	72
Labs	ADSL2+ modems	52
Challenges	Internet security suites	69
Best Buys	All the top products	74

broadband

Internet	Broadband news and directory	83
----------	------------------------------	----

how it's done

Ajax	Coming clean about Ajax	100
------	-------------------------	-----

exploding tech

Inside tech	Samsung SyncMaster 215TW	102
-------------	--------------------------	-----

workshops

Windows	Project PowerToy	104
DVD menus	On the menu tonight	107
Media PC	New media centre PC, part 1	110
CMS	Mastering Joomla, part 1	112
Graphics	Colour basics, part 3	115
Online	eBay come, eBay go	116
Video	Mastering Video, part 3	120
Linux	Mastering Linux, part 19	122

downtime

Gear	Circuitboard Coasters	126
	USB G-Gloves	
	Creative Zen Vision: M	
	Deflexion Laser Game	
Books	Digital Video for Dummies, 4th Ed	126
	The Art of Intrusion	
	The Robot Builder's Bonanza, 3rd Ed	
	How to Do Everything with Photoshop Elements 4.0	
Games	The Elder Scrolls IV: Oblivion	128
	Blazing Angels: Squadrons of WWII	
	Dungeons & Dragons Online: Stormreach	
	Call of Cthulhu: The Dark Corners of the Earth	
	Ghost Recon: Advanced Warfighter	
Chip chat	The lighter side of IT news	132

Privacy notice located on page 33.

DVD Contents



When you see this icon throughout APC, it means bonus software included on the cover disc.



This logo indicates a free, complete and unrestricted software package, available only on APC's cover DVD.

ADVERTISERS' INDEX

ACO	142
Anyware Computers	141, 143
ASUS	25, 41
Australian IT	27
Big Ben Computers	133
Biz Whiz	140
Capax	146
Claritas	Complete Wireless Office
Corporate Software	138, 139
Creative Labs	OBC
DiskMax	140
D-Link	Complete Wireless Office
Engin	55, 57, 59
Engin	Complete Wireless Office
GOTalk	Complete Wireless Office
Great Design	125
Hewlett Packard	15
Linksys	Complete Wireless Office
Manacom	99
Maxon	Complete Wireless Office
Microgam	145
NEC	49
NEC	Complete Wireless Office
Netcomm	61
Netgear	51
Optus	2, 3
Pioneer	8
PQI	91
Region 4	71
Scorpion Technology	136, 137
Server 101	144
Smart Artist	107
Sony	13
Storage Craft	66
Take 2	128, 129, 131
Targus	Complete Wireless Office
TEG Computers	134, 135
Today Tech	82
Toshiba	47
Toyota	7
TPG	29
Twinhead	43
Vodafone	Complete Wireless Office
Western Digital	89

3D HOME ARCHITECT HOME DESIGN SE 6

Plan and design renovations or your dream house — view in 3D and print blueprints



JUST RELEASED

FEDORA CORE 5

The latest, complete release of this leading Linux distro

For x86. Requires CD burner to create install CDs.

FULL DISTRO
3GB



MASTERPLAN PROFESSIONAL 6

Get professional with business and marketing plans

Free online registration required. Does not include technical support.



APC EXCLUSIVE B-FREE PERSONAL 4.03 FOUR-MONTH TRIAL

Take control of your personal finances.

EAST-TEC ERASER 2005 BASIC EDITION 6.1

Destroy sensitive files with this digital file shredder.

FREE TRAINING FROM LEARNKEY

Database programming, part one.

PLAYABLE DEMO

Galactic Civilizations II: DREAD LORDS



Editorial

TONY SARNO



The most annoying thing about the recent Melbourne Grand Prix telecast was the endlessly recurring Dodo broadband ad. Firstly, it was just cheesy, featuring Mark Skaife in a Holden supercar being thrashed in a drag race by an animated Dodo spaceship (representing something called "superfast broadband"). Secondly, while the ad went on ad nauseam about this "superfast broadband," the only Dodo plan they mentioned was the \$9.90 monthly plan. No direct connection was made between the two, but I imagine quite a few TV viewers assumed you got "superfast broadband" (whatever that is) for \$9.90 a month.

So I went to Dodo's web site looking for the deal of the century. The fastest broadband sold by Dodo was 1.5Mbit/s, which is hardly superfast, and it cost \$54.90 per month. The \$9.90 plan was, wait for it, for a 256Kbit/s line with 70MB of data downloads. I'm not sure what you can do with a 256Kbit/s 70MB plan — maybe send a few emails and surf to a few non-Flash sites. You'd really only want this plan if you were looking for a dialup equivalent in a broadband connection. A more appropriate vehicle for Skaife to have been racing against would have been a Dodo rickshaw, rather than a spaceship.

Turning to *actual* superfast broadband, for our cover story this month APC tester Dan Warne has compared the performance of ADSL2+ modems at differing simulated line-lengths from the exchange. As it turns out, this distance

is a critical variation that impacts on the performance of different modems. If I were now selecting a new ADSL2+ modem, I would definitely take this into account (see page 52).

Readers love our new End User section (see page 28), but I was concerned that one reader contacted me to say it was mean-spirited since it makes fun of computer newbies. I need to stress that it's also about technical administrators (who may not provide the best help for end users). So please send us your anecdotes at apcenduser@acpmagazines.com.au. We'll give you a prize if we publish it — and other readers may learn from your experience.

We also have a couple of new features in APC. One is called The Creators (page 20), a profile of the technical individuals whose genius, insights and products have had a profound impact on us. We constantly hear from product marketers and sales people — sometimes the engineers and technical people (that are truly responsible for the creation) disappear into the background. The Creators aims to identify them — and bring you their stories.

We're also pleased this month to explode our most expensive product yet: a brand-new Samsung LCD 21in wide-screen monitor (see Exploding Technology, page 102). Our designer, Chris Zammit, had tears in his eyes as this monitor was slowly and irreparably taken apart in the Labs — so we could photograph its insides.

tsarno@acpmagazines.com.au



WE'RE ALSO PLEASED THIS MONTH TO EXPLODE OUR MOST EXPENSIVE PRODUCT YET: A BRAND-NEW SAMSUNG LCD

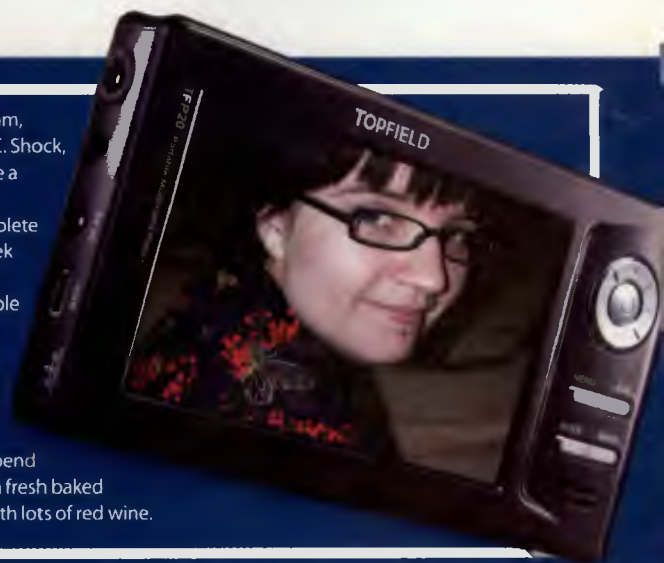
STAFF FILE

Nemoo: Melanie Farr **Age:** 29 **APC job:** Chief Sub-Editor and sometimes Den Mother **Interests:** Dinner parties, books, live music, restaurants, gardening (or at least trying not to kill the house plants!), internet shopping, Tontie — check it out! **Favourite movie:** *The Labyrinth* **Favourite book:** Do I have to pick a favourite? Hmm, how about *Requiem for a Dream*, with *Fight Club* coming a close second. **Dream job:** Food Editor.

Melanie is the newest editorial team member, joining us in November last year. She is our Chief Sub-Editor, so is charged with keeping the writers [and the Ed] on their toes to ensure that APC makes it safely to the newsstand correct and on time each

month. Unlike the rest of our team, Melanie doesn't own a home PC. Shock, horror! She does, however, have a healthy appetite for consumer "gadgets" — so she's not a complete Luddite. We'll turn her into a geek yet! [Oh no you won't!]

She is one of those rare people that has been born and bred completely in Sydney, with no sojourns to any other parts of the world. Although, she does say that she'd love to live in southern France, where she'd spend her days eating local cheeses on fresh baked bread while washing it down with lots of red wine.



More power with reduced emissions?

It's no longer a flight of fantasy.



www.HybridSynergyDrive.com



Ready to Go.

Toyota presents Hybrid Synergy Drive. Blending driving pleasure with lower emissions, it delivers agile driving while respecting the environment. And achieving extended mileage with smooth acceleration, it makes eco-conscious driving more enjoyable than ever. Hybrid Synergy Drive — a whole new world is taking shape.

 Fulfilling performance

Blending smooth, seamless acceleration with satisfying performance, Hybrid Synergy Drive delivers a uniquely enjoyable drive.

 Higher mileage

Extremely efficient Hybrid Synergy Drive pushes your petrol further, while the simple act of driving is all it takes to charge the battery.

 Minimized emissions

Partnering a petrol engine with electric power, Hybrid Synergy Drive cuts back CO₂ (Carbon Dioxide) and other exhaust emissions.

 Surprisingly silent

Hybrid Synergy Drive can even run on the electric motor only — offering a driving experience that's surprisingly silent.

TOYOTA

DreamBook Light 822

RRP (inc GST) from
\$1,649*

Light and compact
14.1" Widescreen
Dual Core Centrino®
HOT!



- Intel® Centrino® Mobile Technology
- Intel® Core™ Duo Processor T2300 (2MB Cache, 1.66GHz, 667MHz FSB)
- Intel® PRO/Wireless 3945 802.11a/g
- 14.1" Widescreen XGA 1280x800 TFT Screen
- Intel® 950 / ATI X1600 256MB PCIe Graphics
- 512MB 533MHz DDR2, 60GB Hard Drive
- CD-Rom, DVD/CD-RW Combo, DVD-/RW DL

DreamBook Slim 825

RRP (inc GST) from
\$2,099*

Slim and powerful
15.4" Widescreen
Dual Core Centrino®
HOT!



- Intel® Centrino® Mobile Technology
- Intel® Core™ Duo Processor T2300 (2MB Cache, 1.66GHz, 667MHz FSB)
- Intel® PRO/Wireless 3945 802.11a/g
- 15.4" Widescreen XGA 1280x800 TFT Screen
- ATI Radeon X1600 256MB PCIe Graphics
- 512MB 533MHz DDR2, 60GB SATA Hard Drive
- CD-Rom, DVD/CD-RW Combo, DVD-/RW DL

DreamBook Slim 805X

RRP (inc GST) from
\$1,649*

Mid-range
15.4" Widescreen
Centrino®



- Intel® Centrino® Mobile Technology
- Intel® Pentium® M Processor 740 (2MB L2 cache, 1.73GHz, 533MHz FSB)
- Intel® Wireless 802.11g Integrated
- 15.4" Widescreen XGA 1280x800 TFT Screen
- nVidia GeForce Go 6200 128MB Turbo Cache
- 512MB 533MHz DDR2, 60GB Hard Drive
- DVD/CDRW Combo, Carry Bag

DreamBook Slim 800

RRP (inc GST) from
\$2,149*

High performance
15.4" Widescreen
Centrino®



- Intel® Centrino® Mobile Technology
- Intel® Pentium® M Processor 760 (2MB L2 cache, 2.0GHz, 533MHz FSB)
- Intel® Wireless 802.11g Integrated
- 15.4" Widescreen XGA 1280x800 TFT Screen
- nVidia GeForce Go 6600 128MB PCIe
- 1GB 533MHz DDR2, 80GB Hard Drive
- DVD-/RW Dual Layer, Carry Bag

DreamBook Slim 400AE

RRP (inc GST) from
\$2,449*

High performance
15" Centrino®



- Intel® Centrino® Mobile Technology
- Intel® Pentium® M Processor 760 (2MB L2 cache, 2.0GHz, 533MHz FSB)
- Intel® Wireless 802.11g Integrated
- 15" SXGA+ 1440x1050 TFT Screen
- ATI Radeon X700 256MB PCIe Graphics
- 1GB 533MHz DDR2, 80GB 5,400RPM HDD
- DVD-/RW Dual Layer, Carry Bag

DreamBook Power 570A

RRP (inc GST) from
\$3,329*

Ultra-high performance
17" Widescreen
Centrino®



- Intel® Centrino® Mobile Technology
- Intel® Pentium® M Processor 760 (2MB L2 cache, 2.0GHz, 533MHz FSB)
- Intel® Wireless 802.11g Integrated
- 17" Widescreen SXGA+ / UXGA TFT Screen
- nVidia 7800 GTX / ATI Radeon X800 XT
- 1GB 533MHz DDR2, 100GB 5,400RPM HDD
- DVD-/RW Dual Layer, Deluxe Carry Bag



Performance superstar.

Pioneer DreamBooks starring

Intel® Centrino® Duo Mobile Technology

give you outstanding performance
for your most demanding software



NSW: (02) 9690 2888 QLD: (07) 3257 3879 VIC: (03) 8790 1830
NZ: (649) 377 0497 Fax: (02) 9690 0333
Unit 2, 37 O'Riordan Street, Alexandria NSW 2015 Australia
Free 1 year on-site pickup & return warranty, 2 & 3 year optional.

* Basic RRP price includes Linspire only. Windows XP Home and Professional are optional.

Trademark Acknowledgement: Intel, Intel logo, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Wireless Disclaimer: Wireless connectivity and some features may require you to purchase additional software, services or external hardware. Availability of public wireless LAN access points is limited. Wireless functionality may vary by country and some hotspots may not support Linux-based Intel Centrino Mobile Technology systems. System performance measured by MobileMark® 2002. System performance, battery life, wireless performance and functionality will vary depending on your specific operating system, hardware and software configurations. All prices include GST but exclude freight. All images are for illustrative purposes only. Errors and omissions accepted.

Build your own online:
www.pioneer.net.au

Call: 1300 88 32 18
Email: sales@pioneer.net.au

PIONEER

COMPUTERS AUSTRALIA



ADSL2+ coverage gets massive boost



Telstra stands to lose thousands of broadband customers following Optus' announcement that it will wholesale its ADSL2+ network to other ISPs, *Tim Gaden* reports.

When Optus' DSLAMs are fully deployed next year, Optus claims that its "Optus DSL Direct" service will be available to 2.9 million potential customers on 340 exchanges. Its "up to 20Mbit/s" download speed is 13-times faster than Telstra ADSL1's 1.5Mbit/s.

But the real market shake-up is Optus' decision to offer other ISPs access to its new network from the second half of this year.

Other ISPs like iiNet, Internode, Adam and iPrimus have high-speed networks, but their coverage is limited and they are signing up customers so fast they say they can't accommodate access for other ISPs.

Now, for the first time, Telstra Wholesale faces real large-scale competition. And while Telstra is

ADSL2+ modems speed tested — page 52
Make sure you read our in-depth comparison before buying.

tied up in negotiations with the government over its ADSL 2+ "Fibre to the Node" network, Optus is getting first bite at a hungry market.

Major players are already looking seriously at the Optus offer as a way to extend the reach of their own smaller ADSL2+ networks.

A key ADSL2+ ISP (who asked not to be identified) is excited by the new opportunities for its business and customers, telling APC, "Optus has really done its homework on its wholesale and retail ADSL2+ offerings. The technology and business models

look good. Telstra keeps working against its own customers by deliberately withholding ADSL2+ services from the market. The longer Telstra plays that high-level game of regulatory poker, the more likely it is Optus will eat their lunch."

Telstra said it was not concerned that it would lose thousands of customers to the Optus ADSL2+ wholesale network.

"Clearly, some customers obviously would [prefer an ADSL2+ service]," conceded Telstra spokesman, Rod Bruem. "But Optus has a lot of learning

to do as it enters the market. Telstra is hopeful of being able to provide greatly expanded services in the near future, but unfortunately the regulations at the moment won't permit it."

Optus and Telstra have gone to war over broadband before. Two years ago, both telcos engaged in a price-cutting battle over entry-level ADSL1 plans. Now, as both companies get ready for a battle over ADSL2+, Optus consumer acting managing director, Warren Hardy, has signalled that the gloves are off again over ADSL2+. "Sadly, the incumbent is so desperate to protect its fat profit margins that it has gone whining to Government... but we will not be deterred," he claimed.

Vista will be released in 2007... really!

Vista was rock-solid, "we promise", going to be released in 2006... Now, it's absolutely (definitely) happening in January 2007.

Australian Windows chief Jeff Putt told APC it was testament to Microsoft's business planning processes that the software giant could predict it would need (even) more time.

However, Putt did concede that the issue of how to separate consumers from their cash for the Vista upgrade (while they were still suffering

from turkey overload and Christmas credit card remorse) had been "weighing heavily on his mind".

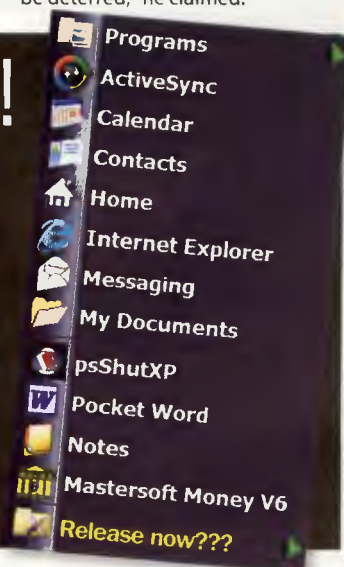
One tactic Microsoft is planning is roving roadshows — which demonstrate Vista to user groups to generate anticipation for the product — before Christmas.

Putt slammed online reports (claiming that Windows Vista

was having up to 60 per cent of its code rewritten) as being "clearly incorrect".

He said that Microsoft was releasing the enterprise version of Vista to business customers before the end of the year — and that logic dictated Microsoft couldn't rewrite the bulk of Windows' code in just a few months.

Dan Warne



THE (A)PC REVOLUTION

June 1986

Back up 10 megabytes
in 8 minutes!
with Fastback

NEW
VERSION 5.0!
SAVE \$100
off Retail Price.
YOU PAY ONLY
\$150

BACKUP! IN SLOW MOTION!

Back in 1986, fast backup meant making two cups of tea, not five, while you waited. For \$250, "Fastback" version 5.03 was wowing crusty tape users with promises of eight-minute backups for 10MB backups. Try that with your fancy microtape. Oh, and it was "completely file-oriented".

Excel

MICROSOFT

EXCEL ARRIVES

(BUT YOU NEED 512KB)

Windows hadn't arrived yet, but already Microsoft was making a name for itself on the Mac platform with Excel. You needed 512KB, but with that you got something "indispensable" to management (Microsoft's words, not ours).

CONVERTIBLE NOTEBOOK

You'd be amazed how long notebook vendors have been pushing the idea of portable units with detachable/swivelling screens. In APC's June 1986 issue, we reviewed the IBM Convertible, which turned into a desktop system with the removal of its 9in monochrome display. It also weighed "about the same as a small typewriter".

William Maher

XP GETS UPDATED, NO THANKS TO MICROSOFT

One user was so frustrated with XP's outdated driver collection that he took it upon himself to update it. 9GB later, he's still going strong.

In 2004, a friend of Belgian PC-enthusiast Wim Leers asked him if he could help make a CD that would allow Windows XP to install in unattended mode, even if XP didn't include the required hardware drivers. That request was the genesis of DriverPacks (<http://driverpacks.net/Projects/DriverPacks/>), a project which now incorporates more than one thousand drivers for all kinds of hardware across eight categories (and makes it possible to do a hands-off XP install — knowing you won't need to go trawling for drivers).

Despite the mammoth scope of the project, 18-year-old Leers (handle: Bâshrat the Sneaky) still manages the bulk of development himself. While many drivers can simply be added to the main storage

system for the project, which now comprises more than 9GB of driver files and associated code, that isn't always the case. "Workarounds are necessary, because some drivers simply suck," Leers notes, with the mass storage and sound categories proving particularly fiddly.

The project has attracted plenty of positive feedback. "Whoever publishes this must have gone through hell and back, but he did the world a favour," one typically grateful blogger remarked. Leers says that while such responses were initially encouraging, his main motivation for continuing was old-fashioned stubbornness: "I know it seems like an immense project, but when I start something, I want to finish it." A Vista version of DriverPacks is likely eventually.

"Whatever Microsoft decides to do, I'm confident they won't support all drivers and that the tools they will deliver will be either insufficient or too expensive," he says.

In the meantime, Leers is working on transitioning the DriverPacks code base to run fully in C++ (and also on enhancements to automatically add new drivers without a manual request system). A professional version for companies with complex install requirements is also planned, though he's pledged that the free version (supported via a donations system) will remain available. "I've spent so much time on this project without getting much in return, so it'd be nice if we could make some money out of the professional options."

Angus Kidman

Now with no DRM

Digital rights management (DRM) — or the lack of it — has become the latest lure in the high-definition DVD wars.

Studios backing both Blu-ray and HD-DVD have been opting out of using a controversial DRM technology in their initial batch of movie releases.

Both formats are capable of using Intel-backed and Vista-destined HDCP, which includes provisions for downsampling high-definition images if they're transmitted to a non-compliant device (or across an older analog connection rather than a newer HDMI cable).

The process uses a flag known as the Image Constraint Token (ICT). If the ICT is set on an individual DVD title, then output will be essentially limited to standard TV quality on non-aware/older devices, eliminating any picture quality benefits and

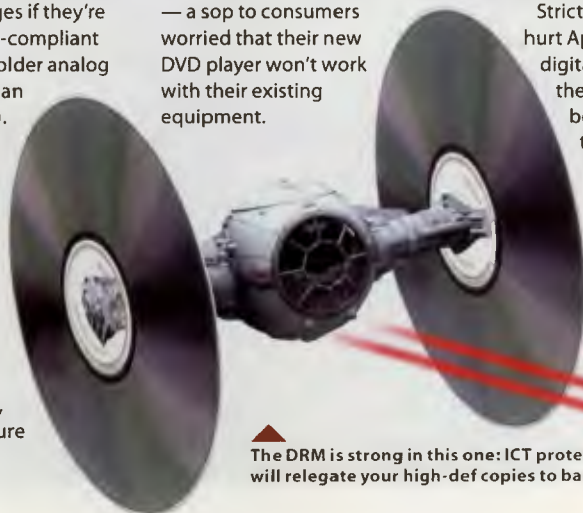
making it harder for pirates to render exact hi-def copies.

Despite general Hollywood enthusiasm for anti-piracy techniques, all three major studios backing Blu-ray and two of the three in the HD-DVD camp have said they won't be implementing ICT on their early high-def releases — a sop to consumers worried that their new DVD player won't work with their existing equipment.

Enthusiasm for high-definition DVD has already been muted by the prospect of a format war; delays in hardware releases have further soured the market. However, industry observers doubt DRM will be ignored in the long-term, arguing the exclusion of ICT will be used as a carrot to attract initial buyers.

Strictly-enforced DRM hasn't hurt Apple's dominance of the digital music market, although there is one crucial difference: both DVD formats are selling themselves on higher quality, a claim that heavily compressed music formats haven't made. Largely ignored in the debate is whether DVD pirates care about picture quality anyway.

Angus Kidman



The DRM is strong in this one: ICT protection will relegate your high-def copies to bantha fodder.

What's hot in Firefox 2.0

Firefox 2.0 is out in alpha form. APC's Jeanne-Vida Douglas braved the buggy waters to rate the top five new features.

1 PLACES

Based on SQLite, the Places function is designed to make it easier to use and access bookmarks, browsing history and RSS subscriptions. Although it looks like the IE sidebar, it is far more functional and enables users to construct queries over bookmarks and histories (and will automatically pick up history and bookmarks from other browsers and previous versions of Firefox).



2 ENHANCED TABS

Already popular among users, Mozilla is putting a lot of effort into further enhancing the tab browsing system for flicking between open web pages. Firefox 2.0 alpha offers little x buttons on the tabs to close pages, and Mozilla is trying to make the system synchronise better with the Places function — and more compatible with third party web applications.

3 MAKING HISTORY

Armed with research suggesting web site revisits account for roughly 39 per cent of pages browsed, Mozilla is trying to go beyond the auto-complete URL bar, adding a drop-down History menu along with File View and Edit. Part of this new function is the MozStorage system, which enables users to execute a search query on the last 100 pages visited.

4 EXTENSION BLOCKLISTING

Firefox extensions are third party enhancement plug-ins which have been found, in some cases, to contain serious bugs. In an attempt to protect Firefox users, Mozilla has created a Blocklist of extensions which are found to be flawed or to create vulnerabilities. This list will be provided via an automatic software update function and will warn users before disabling offending plug-ins.

5 IMPROVED RSS

Making it easier to access news feeds and podcasts, Mozilla has substantially enhanced its RSS functions by enabling users to organise and create individual tabs for different feeds. Improvements in feed handling mean Firefox 2.0 alpha also offers easier access to RSS aggregators, client applications and web services (as well as a drop-down feed menu).



VCDHD

Maybe it's time to forget Blu-ray and HD-DVD, because what we really need is a mysterious Russian DVD format called VCDHD.

The www.vcdhd.com site is spruiking the "essential" advantage of the new disc, such as flexibility (the disc is really thin), resistance to damage, and use with blue lasers for capacity up to 15GB. (At least that's what we think it says — we've been reading the site through an online translator).

Remember when buying a new disc drive meant simply choosing between 5.25in and 3.5in? Ah, good times.

William Maher



Want to nominate a dumbest moment in tech?

Send an email with the subject line "Dumbest Moments" to dwarne@acp-magazines.com.au. All correspondence becomes the property of APC.

INTERNET EXPLORER 7.5 & 8: WHAT'S NEXT

If you could convince Microsoft to add a feature to the next version of Internet Explorer, what would you request?

More CSS standards support? Even greater levels of security? A way of ensuring full backward compatibility of web sites and apps? More printing support?

Microsoft asked attendees of its MIX06 developer conference in late March what kinds of features and functionality they'd like to see in future IE releases. The answers were all over the map. Seems you can't please all the people all of the time (as the IE team knows well).

By the time IE 7.0 for XP comes out this year (around the same time as the manufacturing release — not the postponed launch — of Vista), it will have been five

years since MS released a standalone version of its browser. But now it seems the Redmondians are out to make up for lost time and have two new versions of IE in the hopper.

Microsoft wants to crank out IE releases more frequently — and less secretly — in the coming years. While MS chairman Bill Gates mentioned at MIX06 the possibility of a nine-month rev cycle for IE, a year to a year-and-a-half between releases might be more realistic.

At press time, Microsoft declined to talk version numbers or feature lists. The only thing the IE brass did concede was that one of the two next IE releases will

include "a complete reworking of the networking stack." We're not sure exactly what that means, either.

If I had to take a guess, I'd wager we'll see an IE 7.5 in late 2007 (or early 2008) and an IE 8.0 (including a version integrated into "Fiji," the version of Windows between Vista and "Vienna") around 2009. We'll see a more CSS 2.1 and/or 3.0-compliant IE 7.5. And we'll see more RSS integration, better printing support and additional security-focused control. And whatever Mozilla, Apple and Opera do, we're betting we'll see Redmond extend, emulate and "embrace," in true Microsoft fashion.

Beyond that, what's on your wish list for IE? email epinions@acp-magazines.com.au.



Mary Jo Foley is the editor of Microsoft Watch (www.microsoft-watch.com). She sounds off exclusively for APC on Windows each month.

WindowsWatch

in brief

**SAMSUNG 32GB FLASH DRIVE**

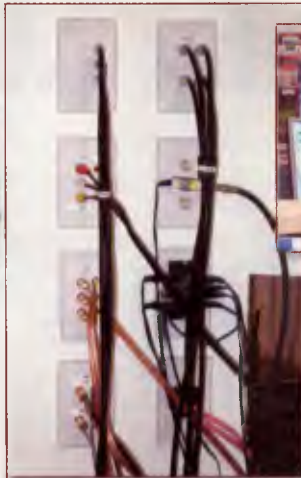
Samsung is predicting the death of the mechanical hard disk, showing a prototype 32GB drive in a 1.8in form factor based on flash memory. When it goes into production, the drive will cost around US\$30 per gigabyte (US\$960) the company said. However, flash-based drives are substantially faster than hard drives and more power efficient, which Samsung is betting will justify the price for users.

FUEL CELLS OK INFLIGHT

Day-long laptop battery-life is becoming a reality, with mobile fuel cells gaining approval to be carried on international flights. A small methanol-based fuel cell cartridge, expected to hit store shelves next year, will provide a charge that lasts up to nine hours. Fuel cells actively generate power through chemical reactions in the methanol, rather than releasing stored power as standard batteries do.

\$1 LAPTOPS

German mobile phone network T-Mobile is offering 3G-capable laptops for \$1 upfront, as long as people will sign up for a monthly wireless internet plan. With laptops now cheaper than many mobile phone handsets, analysts expect this type of offer to spread around the world. Laptop maker Fujitsu Siemens is already in discussions with Vodafone for its worldwide network.



It's like Advanced Hair implants but for cables.



Paul's cables are taking over the world, slowly they are spreading their tendrils...



Extreme geek

Online, all the time.

One man's quest to cable everything.

Don't be fooled by Paul Cansdale's calm exterior; this man is actually the mac-daddy of home network cabling. When we asked for the plans to his new house, he sent us a wiring diagram.

"I designed and built the house myself with voice, data, and Audio Visual in the plans from the start," Paul explains. He isn't kidding. What looks like a refrigerator sits in his "wiring closet", next to a wall covered with enough VoIP routers to give migraines to visiting telco technicians.

While others dream of clichéd home features of dubious real value — like skylights, or "rumpus rooms" — Paul has the flashing lights of network routers in

his eyes. Even before the concrete foundations of his house hit the dirt, he'd figured out where the Cat 5e ports would go.

Paul's entire pad is cabled with "multiple" Cat 5e in all rooms, as well as audio feeds to the major living areas and the cinema room. Audio comes from a central server and is fed through a Netgear MP101 box. All the house phones run through a Sipura ATA VOIP adapter.

On closer investigation, it turns out that Paul was literally intending on building a giant PC Lab — the house is a testing ground for the systems he builds for clients, as part of his IT consultancy business.

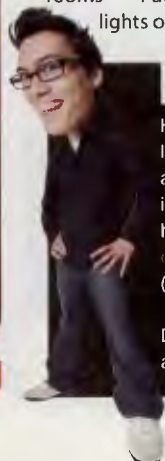
In his spare time, Paul is a volunteer motor race official,

but when he comes home at night, he's lord and master of his electronic domain. Even his solar hot water system is hooked up.

"There are various sensors around the place that are programmed into the system," he explains. "Come home at night and open the garage door and the lighting system will light a 'path' into the house with the appropriate internal and external lights."

Paul, in honour of your efforts to combine hot showers and networking — we dub you an APC Extreme Geek. Now, when are we invited over?

William Maher



HOW GEEKY ARE YOU?

Have you wired up your car? Shared your home media library with five family members in three states? Made a 16 terabyte file server? If you've done something interesting with computing technology, APC wants to hear about it. Email a description of your project to dsavage@apcmagazines.com.au and include photos (we need at least one of you pictured with your gear).

This month's Extreme Geek wins a copy of TurboCAD Deluxe Version 11, a powerful 2D/3D full-featured CAD and drafting program that delivers more features per

dollar than any other consumer CAD package. With little or no experience in computer-aided design, you can create accurate 2D sketches, precision drawings, and intricate 3D models (with powerful visualisation tools to present your ideas). TurboCAD Deluxe Version 11 now features a bonus TAFE NSW CAD Fundamentals Training CD. For information on TurboCAD, see www.mindscape.net.au.



VAIO

Sony recommends Microsoft® Windows® XP Professional.

**VAIO. Limitless laptop.**www.sony.com.au/sz

The new Sony VAIO SZ series is more versatile than ever, thanks to the infinite flexibility of Intel® Centrino® Duo Mobile Technology. A Hybrid Graphic System increases battery stamina when you're on the go, with a high-speed mode for office. Built-in camera and microphone enable voice and visual communication. Fingerprint Recognition and HDD Protection optimise security. All with endless entertainment options, and unmistakable Sony styling.

Celeron, Celeron Inside, Centrino, Centrino Logo, Core Inside, Intel, Intel Logo, Intel Core, Intel Inside, Intel Inside Logo, Intel SpeedStep, Intel Viiv, Itanium, Itanium Inside, Pentium, Pentium Inside, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.



like.no.other

SONY

quote file

I guess they've decided they're a company that's interested in making money and they want to make the most widely deployed operating system available on their platform."

Microsoft Australia's Windows chief Jeff Putt comments on Apple's Boot Camp software that allows Windows to boot on Intel-based Macs.

Google's plot to kill Outlook

Are you sick of being tied into the Exchange/Outlook money making machine? *Tim Gaden* reports on Google's new alternative.

April Fool's Day is traditionally a big one for Gmail. In 2004, it was Gmail's launch date; in 2005 it was the day Gmail storage doubled to 2GBs. This year, many pundits expected to see the release of a new Google killer app, a web-based calendar, codenamed CL2. Google didn't hit the April 1 deadline but, soon afterwards, it did deliver.

Google Calendar is an AJAX-based app, closely integrated with Gmail. It features event creation, a search function and notifications by email, SMS and pop-ups. Calendars can be shared via XML or iCal feeds. The calendar has daily, weekly and monthly views and an

Agenda feature for upcoming tasks and to-dos.

Users can add other calendars by searching for other users' Google calendars marked public or by adding public holiday and other calendars in ATOM or iCal format.

Combined with the ability of businesses to now host their email domain at Gmail, Google is close to



possessing a fully-featured, web-based replacement for Outlook and Exchange server, one of Microsoft's most profitable lock-in cash cows.

Google has already put its toe in the water, replacing Outlook and Exchange servers at San Jose Community College. There, 10,000 students will get email accounts on the college's domain (but hosted at

Google). Unlike Outlook, "massive storage and features that tame the most unruly inboxes, like powerful mail search, conversation view for messages, and a fast interface, make Gmail very handy for students," Google says.

In the longer term, Google may have the whole MS Office suite in its sights following the recent acquisition of the web-based word processor, Writely. Tech commentator Stowe Boyd believes that is a long way off. There are still "a few niches where the superiority of Microsoft Office tools has not been overcome" by web-based applications, he suggests, namely OneNote, Excel and PowerPoint.

Dream System

Azul 48-core CPU

Intel's dual-core CPU launch had more than a few daydreaming about the possibility of a crazed quad-core, or even 10-core system. We say: you are thinking small.

Throwing caution to the wind, the previously unheard-of company Azul has announced plans for a 48-core chip. Using a whopping 812 million transistors, the suitably sci-fi sounding Vega 2 chip will ship in something called "Azul

Compute Appliances". The fact that Azul boxes are meant for data centres, not your lounge room, shouldn't stop you from drooling. Case in point: future Azul machines will supposedly scale up to 768-way symmetric multiprocessing, with up to 768GB of memory.

Other than the fact you'd have to rig up your reverse cycle air-conditioning to keep the thing running, there are numerous reasons why a 48-

core CPU is overkill in the home, but we've quickly dismissed them.

So, full credit to Azul for topping Intel and AMD in the my-specs-are-bigger-than-yours game. The first Vega 2 systems will apparently be ready in 2007, which should give people more than enough time to compare Azul to a shaving company inventing the five-blade razor.



As for us, we're predicting an orgy of multicore action in the next two years (and will be upgrading the air con).

William Maher



TO MINIMISE YOUR I.T. INFRASTRUCTURE HEADACHES, CONSULT YOUR PHONE.

No matter how small or large your I.T. problem – one call to HP's infrastructure solutions team and HP Business Partners can streamline your entire IT system. Our range of HP ProLiant servers and HP Integrity servers powered by Intel® Processors offer you the base of an ideal solution for any I.T. headaches. Our dedicated team will get to know your business issues and work with you to determine the right solution.

Be it the HP ProLiant BL20p Blade server powered by Intel® Xeon® Processor, or the HP Integrity rx4640 server with 64-bit technology powered by Intel® Itanium® 2 Processor, each offer the performance your business needs. Partnered with the HP StorageWorks portfolio to protect and maintain your data and enhanced by HP's wide range of software and services – it's an I.T. solution that's sure to minimise your headaches and maximise your capabilities.

HP's infrastructure management and support capabilities enable your business to get the most out of the worlds No.1 server and storage vendor*, so pick up your phone.



HP ProLiant BL20p Blade server, powered
by Intel® Xeon® Processor

**FOR INSTANT PAIN RELIEF
CALL 1800 177 215**





YOUR PC IN 2007

2006 has so far been marked with huge hardware hype, and a load of promises. *John Gillooly* sorts through the rhetoric to outline what changes are in store for the PC.

Ground Control to Major John: our Technical Editor, John Gillooly, walks us through the future of PC technology.

Already in 2006 we have experienced a marketing bombardment from Intel, who has told us it will revolutionise not only mobile computing (again), but also the digital home (again) — and even business computing (again) with its next-generation architecture. Soon we are to experience round two, where AMD continues its wonderfully disruptive marketing by launching AMD Live! to compete with Intel Viiv. It is also likely that we will see both Intel and AMD unveiling their next-generation desktop components during the annual Computex trade show in Taipei.

Technology companies are masters at telling us what we want; however, the marketing buzz surrounding tech so far this year has obscured a lot of detail. It is easy for us to feel that the only really solid information given on how PCs will evolve in the next twelve months will focus on a shift from Pentium to Viiv stickers.

But the PC has been undergoing rapid change for some years now, and we are reaching the culmination of this effort as next-generation technologies are starting to solidify their place in the market. What this promises are desktop PCs that bristle with processing units and serious memory capacity — and which maybe even run that Window's Vista OS that Microsoft is so fond of delaying.



This device from Belkin will use ultrawideband to turn USB gear wireless. ▶



▶ The current 85Mbit/s standard for powerline networking is set to jump to 200Mbit.

▶ AGEIA's PhysX cards are set to tempt gamers with new levels of realism.



DESPITE COMMON MISCONCEPTIONS, DDR2 IS NOT ABOUT BEING FASTER; IT'S ABOUT HIGHER MEMORY CAPACITIES

CHASSIS DESIGN

Despite Dell shifting all its desktop PC designs to Intel's BTX form factor, this next-generation chassis spec never took off. Released to combat the spiralling heat output of the Prescott core Pentium 4 processor, this case design was indeed thermally efficient; however, systems were heavier and BTX component availability was severely limited.

Still, BTX was not originally designed as a way to cope with high heat output. The concept came from developments in small form factor design, improving cooling while keeping the chassis small and silent. By returning to focus on these roots, BTX is set for a new lease on life as the form factor standard for hi-fi type PC designs. Widespread adoption by Taiwanese and Chinese manufacturers is also the only way we would expect AMD to turn around and support BTX.

For your average power-user desktop system though, ATX will continue to go from strength to strength. What will also go from strength to strength is your power bill, as a proliferation in processing power will put strain on power

supplies. The trend towards higher capacity power supplies will continue unabated; the first 1,000 watt power supplies have already begun to appear and, as people cram more and more processing in their systems, such solutions will become the norm rather than a luxury.

PROCESSORS

Even though we have seen a significant shift in CPU design from single to multicore processors, there are still major changes to happen before the end of 2006. The first is the relatively minor evolution of AMD's Athlon 64 platform to the new AM2 socket. This change has been necessitated by the inclusion of a DDR2 memory controller in the Athlon 64 core. These processors will be targeted at a 65 watt thermal envelope, with low-power designs aiming at a measly 35 watts. Apart from this, we expect to see a move beyond dual- to quad-core, at least in the server space, in the next year.

Intel's changes to its CPU design are much more radical. Its next desktop architecture, codenamed Conroe, is a true successor to the

now-aged Pentium 4 design. It draws heavily from the Pentium M design and involves two cores on the same silicon, sharing 4MB of L2 cache. It promises to provide a much more thermally efficient solution to PC design, with a rumoured 65 watt heat output for mainstream processors (and high-end CPUs that pump out less than 100 watts).

The move from single to multi processing is not just happening in the CPU socket. There is a wholesale push for people to jam more and more processors in their systems. Both the incumbent graphics card manufacturers are now heavily pushing dual-card video solutions (and startups like AGEIA are busily trying to convince us we need yet another processor inside our PCs, this one dedicated to game physics calculations).

Potentially, this means that a "money is no object" system could have two CPUs, four graphics processors and a physics processor. Of course, this then opens up a whole raft of challenges for developers, as they struggle to keep so many different cores fed with data and working in synch.



▲ Vista's inclusion of DirectX 10 promises to revitalise PC gaming.



▲ Nvidia's Quad Card SLI implementation is imminent.



▲ DirectX 10-based titles, such as Crysis, raise the bar for graphical realism.

We expect to see major architectural revamps from both Nvidia and ATI in the next six months. Both manufacturers have recently released refreshes of their current architecture and the expectation is that they will now focus on graphics chips designed for DirectX 10 (which is part of Windows Vista). While Nvidia's plans are still hush-hush, it is expected that ATI will employ the unified shader design of the Xbox 360's graphics processor rather than extend the current discrete shader design.

More and more, the marketing focus of graphics will move from game-focused to video-focused, as both ATI and Nvidia push their technology at those wanting to watch and create HD video.

MEMORY

While Intel leapt on the DDR2 bandwagon a while ago, it will only be with the launch of AMD's AM2 socket that the entire desktop PC industry adopts the DDR2 standard. Despite common misconceptions, DDR2 is not about being faster than DDR; it is about increased support for higher memory capacities. Power users will be looking to pack at least 2GB of this memory in order to provide enough to run Vista (as well as the applications on top of it).

CONNECTIVITY

After an unspectacular youth, marred by high cost and bottlenecked by the PCI bus, expect to see a rebirth of Gigabit Ethernet in the home. Intel's Viiv spec includes a Gigabit Ethernet adaptor, and this is seen as the preferred means of home networking. Thanks to the launch of PCI-Express a few years ago GigE adaptors are now capable of their full bandwidth (almost 2Gbit) and the once prohibitive cost of routing hardware is steadily dropping.

For those who can't cable their home, the solution may well be powerline networking. This concept has floated around the industry for years, with limited degrees of commercial success; however, the increased reliance of networked consumer electronics devices has led to development of a new 200Mbit HomePlug AV standard (actual throughput is more in the 100Mbit realm). By providing enough bandwidth (and ducking the reception and latency woes inherent with 802.11), wireless powerline networking seems set to become a very attractive option.

In the wireless space, PCs will be using a mix of 802.11g and 802.11n hardware. Ratification of the 802.11n standard isn't far away and although we have seen a smattering of proprietary "Pre-N" and MIMO wireless equipment, the official 802.11n standard will bring with it an explosion of product launches.

STORAGE

The focus continues to be on capacity for desktop PC storage. Drives have been delivering



Expect to see Viiv PCs like this Acer model everywhere.

Blu-ray and HD-DVD drives are beginning to enter the market.

data at the same speed for five years now and, apart from the continued existence of oddities like the WD Raptor 10,000rpm drives, the current 7,200rpm speed of drive will continue to be the desktop standard. The emphasis continues to be on density rather than speed, and the emergence of perpendicular recording technology on 3.5in hard drives will allow manufacturers to continue to increase capacity at the current rate.

However, two new types of hard drive will be trickling their way into PCs. The first was recently unveiled by Samsung — a 32GB drive comprised entirely of NAND Flash memory. Promising exponential increases in access (and especially boot speeds), the drive is currently more proof of concept than anything. If Samsung can get the price competitive with mechanical hard drives, then this could become the breakaway must-have product for performance enthusiasts (and the first thing to even start touching Serial ATA's available bandwidth).

Intel has also been talking about a technology called Robson, which promises to merge the worlds of flash and mechanical hard drives. This involves equipping the drive with a decent chunk of flash RAM to facilitate quick booting of Windows — and is a key feature for inclusion in future media centre PCs.

Over the course of 2006 we expect to see several Blu-ray and HD-DVD drives hit the market. Given previous trends, it is unlikely that we will see mass uptake of these standards for a

few years yet. The initial price points are going to be high, especially when compared to the dirt-cheap nature of DVD burners (and the focus on broadband as the delivery mechanism for PC-based media means that we are unlikely to see a heavy marketing push for next-generation optical storage).

PERIPHERALS

Currently, the most exciting development in peripherals is languishing in a miasma of spectrum regulations. Ultrawideband is a radio technology that has been developed to run a swathe of wireless cable replacements such as Wireless USB and Wireless IEEE1394. It achieves high-bandwidth, short-range communication by spreading its signal across a wide swathe of the radio spectrum. This is the stuff of nightmares for those tasked with managing the radio spectrum — and Intel is still working hard on getting the required approvals for the technology.

SOFTWARE

Despite zany rumours (like an alleged 60 per cent rewrite of the code), it actually looks like PCs will be running Windows Vista by this time next year. Vista will not only leverage the new

hardware we've mentioned, but it also brings onboard support for more extensive featuresets of established technologies like Serial ATA and PCI-Express. Higher-end versions of Vista also ship with Media Center built in, which, when combined with Intel's Viiv software suite, will encourage even those currently disinterested in digital media to take a second look at how their PC can handle it.

Another area set to undergo a revival is PC gaming. Vista's inclusion of DirectX 10 is promising a quantum leap in graphics quality, and the reliance of the Aero Glass interface on 3D graphics hardware means decent gaming performance will be in the reach of more PC owners than ever before. DirectX 10-based titles such as Halo 2 and Crysis are set to show off the full potential of the API, raising the bar for graphical realism. That said, half the civilised world will still be playing World of Warcraft.

CONCLUSION

Despite the fact that we have been through several major technology upgrades in recent years, the rate of change is not slowing. By the time we see Windows Vista appear early in 2007, the foundations for the next generation of home computing will be in place. There will be unexpected roadblocks to be faced — some of these upgraded technologies will either not make it, or will suffer the same lack of initial traction experienced by Serial ATA, Gigabit Ethernet and USB.

Clarity will come over the remainder of 2006 when we will see the last key pieces in the puzzle fall into place — as everyone from CPU makers to storage experts transition to technology designed to last well into the future. **END**



THE FOCUS ON BROADBAND FOR PC MEDIA MEANS WE'RE UNLIKELY TO SEE A HEAVY PUSH FOR NEXT-GEN OPTICS



the creators... Andrew Tridgell

Australian Andrew Tridgell became one of the world's most celebrated open source developers through Samba. Now he works for IBM's famed Almaden research lab — and talks to APC's Adam Turner.

Imagine you wanted to learn French — but there were no books or courses. You could sit in a Parisian cafe, listening to customer conversations with the waiter and, before long, you'd know the words for "bread" and "coffee".

Years spent perfecting this kind of technique has made Andrew Tridgell one of the world's most renowned open source software developers. Patiently learning the secret languages used by computer networks saw Tridgell develop Samba — which today allows Linux computers to share files with Windows PCs. Samba is one of the world's most widely used open source apps (along with Linux); it's thanks to apps like Samba that Linux and Windows can happily co-exist.

Sydney-born Tridgell first wrote Samba at ANU in 1992 but — like Linus Torvalds and Linux — Samba has since been embraced and enhanced by the open source community. Along with Torvalds, 39-year-old Tridgell is one of the guiding lights of the open source movement. He was even there the fateful day Torvalds received a "friendly little nip" from a fairy penguin at the National Aquarium in Canberra which, legend has it, later inspired Torvalds to choose Tux the Penguin as Linux's mascot.

Tridgell is perhaps Australia's best-known hacker, in the true sense of the word — someone who

modifies things to make them work "beyond perceived limits". While Samba made him a geek celebrity, Tridgell is keen to emphasise it was a group effort. He is also a prolific software developer whose resumé includes the rsync advanced compression algorithm, part of his PhD in algorithm efficiency from ANU. Before this he earned a degree in applied mathematics from Sydney University — and first class honours in theoretical physics at ANU (for which he received the university medal).

Over the last 20 years, Tridgell has designed computer models of financial markets, bushfire spread, population dynamics and even passive sonar technology for Australian submarines. A string of prizes, scholarships and awards grace his mantelpiece, including the Australian UNIX and Open Systems User Group's 2002 lifetime achievement award.

In January 2003, Tridgell joined the IBM Almaden research lab to work on storage systems. He returned to IBM this year after a 12-month sabbatical as a Fellow at the Open Source Development Laboratory, working on the Samba4 project. This year he was presented with the Free Software Foundation's annual Award for the Advancement of Free Software — by Richard Stallman, the founding father of the free software movement.

Tridgell is a leading member of Australia's TiVo-hacking community. He was introduced to the famous hard drive-based personal video recorders when visiting a friend in San Francisco in 2000.

"I immediately went out and bought one even though I knew it might not be possible to make it work in Australia," Tridgell says. It ended up taking him weeks of hacking to make it comply with Australia's PAL TV standard.

Tridgell's background in physics and maths provides a grounding in the analytical skills required for writing and understanding code. Both Samba and TiVo-hacking tap into his passion for pulling things apart to see what makes them tick.

"My parents were driven mad by me pulling train sets apart — and often failing to put them back together again," he says.

"I'd spend ages trying to make gadgets work if they were broken, or breaking them if they already worked. I love problem solving, especially when it involves a 'neat' solution using unusual techniques. That's the heart of hacking, I guess."

Tridgell's introduction to computing came through his brother's HP41C programmable calculator; he was soon modifying basic games on it. Today he has a house full of old computers, with his first "real" computer (a 10MHz V20 Turbo-XT) resting in the attic.

While the French cafe technique sounds like reverse engineering, Tridgell says the term is often misused and his development of Samba is based on network protocol analysis.

"I know some people disagree and insist that any time you work on interoperability with an existing product it must be reverse engineering; I just don't think that's a good way to describe it," he says.

He compares his work with TiVo and Samba to illustrate the point. With the TiVo he dissected and modified the video chip software to work with Australian standards.

"That was reverse engineering," he says. "I was taking a scalpel to the internals of code (that someone else had written) and working out what they had done and how they had done it. So I was 'reversing' the original engineering. This wasn't illegal. I told the TiVo people exactly what I was doing and even talked to the engineer who wrote the code to discuss what I'd found."

"Now contrast this to what I do with Samba. When developing Samba I don't look inside any proprietary code. I write tools that examine traffic on a network while normal file sharing operations are going on. I also write tools that make protocol requests of other servers, to see how they respond externally. As a result, I inevitably end up with something quite



different to what other vendors have done in implementing the same protocols. I see the techniques as quite different, so I tend to correct people when they talk about Samba as being 'reverse engineered'."

What the two projects have in common is an "experimental approach to programming," he says.

"I often work out how something works by throwing random data at it until something interesting happens and only trying to work out why it happened later. When working with hardware that has proper data specifications, this is a silly approach (but I do it anyway), as it's lots of fun. It also works when you don't have any specifications, so I've managed to solve problems that might have stumped people using a more traditional approach."

Tridgell initially wanted to be a physicist (viewing maths as "a tool for doing physics" rather than career) and treated computing as a hobby. His love of computing and physics began to merge during his honours year, when he worked on a numerical model of a gravity wave interferometer — used to detect fluctuations in the curvature of space-time created by objects exerting gravity.

"This meant writing lots of Fortran code and I found I had a knack for coming up with algorithmic solutions to problems and implementing them quickly. This was also the first year that I worked with a 'real' operating system, as opposed to PC DOS.

"When I joined ANU's physics department in 1990, I quickly ended up as system administrator. It was a completely new experience for me and one which I really

enjoyed. It also gave me my first introduction to the world of free software. It was the examples that came with Ultrix that taught me how to write Unix networking code."

Around the same time, Tridgell became involved in his first free software project as a serious contributor — NCSA Telnet for PCs. As the sole user with a DOS-based PC in a uni department full of Macs, he spent a lot of time working on the AppleTalk driver for NCSA Telnet.

"I was using an Osborne 286 system that I had bought at the start of my honours year. Towards the end of that year I had what turned out to be a real stroke of luck — the system died! It was just

Millennium Copyright Act, which criminalises production and distribution of technology that can circumvent copyright protection. Such laws could make themselves felt in Australia as part of the free trade agreement with the US.

"I think many of the recent copyright laws like the DMCA are a really bad idea, swinging things too much away from consumer rights. The Electronic Frontier Foundation paper "Unintended Consequences: Five Years under the DMCA" explains the problem very well," Tridgell says.

"I'd certainly like to see the laws on software move to being more consumer-friendly. I like to think

withdrawing the free version. While Tridgell claimed he was using network protocol analysis to develop open source software that was interoperable with BitKeeper, BitMover accused Tridgell of violating the BitKeeper software license, trying to reverse engineer it to create a competing product.

Losing the use of BitKeeper was initially a significant blow to Linux development and led to a messy public falling-out between Tridgell and Linus Torvalds. Torvalds was a key supporter of using BitKeeper to accelerate Linux development, despite warnings from sections of the Linux community against relying on non-open source tools.



AS A KID I'D SPEND AGES TRYING TO MAKE GADGETS WORK IF THEY WERE BROKEN, OR BREAKING THEM IF THEY ALREADY WORKED

within warranty and I took it back to the shop, only to be told they didn't sell 286 systems any more.

"They asked if they could replace it with a 386sx instead (of course, I was delighted). That 386 made it possible for me to experiment with Linux when it came out."

This experimentation saw Tridgell become co-founder of the Canberra Linux User Group in 1993. About this time, the fledgling Linux community was discovering Samba and, by the end of the year, Tridgell had founded a Samba development team.

Since then, the legal standing of both reverse engineering and network protocol analysis has become murkier. This trend seems destined to continue due to restrictions such as the US *Digital*

that free software has helped with this, as it has amply demonstrated that alternatives to the 'lock down all your users' approach can work."

"Before I released the most contentious of my TiVo hacks, I went to visit the TiVo people in San Jose and talked to them about what impact my code might have. They never threatened legal action and in fact told me that as far as they were concerned everything I had done was completely legal. I think it's a great pity TiVo started to lock down developer access in the Series II models."

In April 2005, Tridgell's work with BitKeeper — a free, but not open source, application used by the Linux community to manage Linux development — led to BitKeeper's owner BitMover

"As it turned out, losing the free BitKeeper licence didn't have any lasting impact," Tridgell says, "as Linus led a fantastic effort to create an alternative called 'git', which in many ways is actually better-suited to Linux kernel development."

Such legal hurdles are becoming more common for both hackers and the open source community. It may not be the last time Tridgell's habit of eavesdropping in French cafes causes trouble, but he's confident it's a culture that won't die easily.

"I don't think the hacker culture will be really significantly hurt by the changing legal environment; it will just adapt like it has always done. The desire to tinker with interesting toys runs too deep to be killed off." **BITK**

Scamming the scammer

Geeks are getting their own back when it comes to combating crime. **Jeanne Vida Douglas** explains how **3** online communities are pooling their skills and resources.

1 It has become a blood sport for geeks: hunting online fraudsters and turning the scam back on them. From the "419" sites (which document dealings with Nigerian scammers) to online forums whose users identify dodgy deals and alert consumers to questionable traders, online vigilantism is becoming a popular pastime.

Blogger and professional photographer Thomas Hawk describes his experience of being ripped off online as "the classic tale of David and Goliath retold".

"We all have, at one point or another in our lives, been bullied and most of us have been defrauded or ripped off," said Hawk on his blog.

"The fact that so many times in the past there was nothing we could do about it makes us feel all that much better about the fact that — in today's internet and blogosphere — we actually CAN do something about it."

But if you're thinking of getting into "scambaiting" (which involves responding to emails of fraudsters trying to scam you and instead trying to turn the scam back on them), be warned: it can be a dangerous activity.

Having been involved in tracking down and prosecuting London-based Australian ex-pat James Holley (for his involvement with so-called Nigerian scammers), Colin Dyson, Commander of the Fraud Squad in Australia, actively discourages anyone from knowingly

entering into contact with scammers.

"These people aren't just fraudsters; they are often also using the scams to fund organised crime, so they aren't people to be toyed with," Dyson says. "I am also concerned that the activities of so-called scambaiters could overlap with police and obstruct or jeopardise legitimate law-enforcement activities."

1 THE P-P-POWERBOOK

The P-P-Powerbook saga began innocently enough, with forum participant "MyNameIsJeff" listing a friend's computer for sale on eBay.

For the first few days, no-one showed any interest, until Jeff was contacted by "msalamon" (aka Gianluca aka

scont06@yahoo.com), who suggested using an escrow service to complete the purchase. Legitimate escrow services act as third parties to such transactions, holding equipment until payment has been completed or vice versa. However, Jeff immediately recognised the escrow service suggested by msalamon as a fake. So rather than giving the

scammer the brush off — Jeff played along, egged on and assisted by participants in the Something Awful Forums, where Jeff was reporting his antics.

After a couple of weeks of numerous forum postings and a repartee of emails, Jeff shipped the scammer a P-P-Powerbook, which consisted of keyboard keys and a defunct mouse tacked onto a white document folder. Rather than losing out to the scammer, Jeff forced msalamon to pay hefty international courier shipping and taxes for his P-P-Powerbook, and became an online legend as a result.

While this scambait rates highly on the satisfaction scale, Jeff risked being saddled with shipping costs and taxes and suffered a nervous wait for the P-P-Powerbook to be collected at the other end. Having picked up the now legendary P-P-Powerbook, msalamon disappeared, never to be heard from again.

Read the full saga at <http://easynetworknyc.com/powerbook/>.

2 THOMAS HAWK'S PRICERITEPHOTO

Thomas Hawk discovered the power of the blog when he came into conflict with camera retailer PriceRitePhoto.

After placing an order for a high-end camera at what seemed like a bargain price, Hawk was

GET WIRELESS INTERNET access
...anywhere...anytime...

with the exclusive
HUGHES AXs card

- Portability - Online access from your computer or laptop - no phone line required!
- Speed - 4 x faster than Cable!
- Unlimited downloads - No exceptions or restrictions!
- Customer Service - 24 hours a day, 7 days a week!
- Onsite installation - In home or office!

Save \$30 per month!
Order before March 15th, 2002
\$ pay only \$70 per month - capped for the next 5 years!

Call us today on:
1300 761 233

HUGHES
Affiliated with General Motors Corporation

CALIFORNIA • TORONTO • AUSTRALIA • SINGAPORE





Photos collected by a scambaiter.

contacted and bullied to buy a slew of overpriced accessories — which he refused. When the camera didn't turn up, and he finally got through to the company, he was told the unit was out of stock. Ticked off, Hawk threatened to write a bad review of the retailer, and then the fun really began.

"He went ballistic. He first told me he would not cancel my order but just never fill it. He'd charge me a 15% restocking fee [and that] he was an attorney and would sue me if I wrote an article about my experience. He said that if I hung up that he would just charge me for the whole camera and never ship it."

However, rather than simply resolve the issue on his own, Hawk registered his concerns with tech news web site Digg. Within a day or two it was the top Digg story and from there was picked up by IT news sites Slashdot, Boing Boing and MetaFilter, before finally hitting the *New York Post*.

As a result, PriceRitePhoto and associated trading names were removed from popular e-tailer directories like Yahoo!, Google, MSN

Search and CNET. Readers of Hawk's blog photographed the company's premises (and that of other online camera stores in the Brooklyn area, many of which are decrepit residential housing blocks).

Read the story in Hawk's own words: <http://thomashawk.com/2005/11/priceritephoto-abusive-bait-and-switch.html>.

3 "DR" RONALD GANDER'S MAGICAL WIRELESS INTERNET

In early March 2002, the broadband users forum Whirlpool was abuzz following the publication of an ad in Brisbane's *The Courier-Mail* offering Hughes Wireless AXs

enquiries and posting their experiences on the forum.

However, as forum members investigated the technology (and the mysterious Dr Ronald Gander who had placed the ad), the too-good-to-be-true offer began to come unstuck. Within a week, pressure brought about by the Whirlpool forum users had forced multinational megalith Hughes Network Systems USA and Ericsson Australia to publish statements distancing themselves from "Hughes Wireless". As it turned out, there were no Hughes Wireless AXs cards, no listed Australian company called Hughes Wireless, no affiliation with either Hughes Network Systems

suspended sentence and on probation for previous offences).

4 419EATER.COM

Sick and tired of receiving dodgy emails from individuals claiming to be the rightful heirs to West African fortunes, UK-based blogger and legendary scambaiter Mike (aka Shiver Metimbers), took it upon himself to teach the scammers a lesson. This he achieved by enticing them into a dialogue, encouraging them to send photos of themselves holding perverse placards and even send him money, which he says he donated to charity.

In publishing his exploits on the 419eater.com web site, Mike



HE WENT BALLISTIC. HE FIRST TOLD ME HE WOULD NOT CANCEL MY ORDER BUT JUST NEVER FILL IT

cards to provide superfast wireless broadband with unlimited downloads for just \$70 per month. At the time, users were frustrated by high ADSL/cable prices. Genuinely excited by the offer, Brisbane-based Whirlpool members began making

USA or Ericsson Australia (and Ronald Gander wasn't a doctor).

In fact, Gander was a fraudster who, at the time the ad was placed, was on probation for four counts of fraud and one of attempting to dishonestly obtain property. Thanks to the Whirlpool forum, Gander's foray into internet fraud was wholly unsuccessful and rapidly curtailed. Within a week of the ad's posting, he disappeared into the ether, claiming bricks had been thrown through his windows after his personal details appeared on the Whirlpool forum.

However, Gander's adventures weren't to end there, as he's currently serving a four-year sentence after attempting to sell the Boeing building in Brisbane (whilst serving a

also encouraged others to join in, offering to post the most innovative exchanges, scambaits, scambaiting tips and pictures of duped scammers on his web site.

However, this kind of scambaiting stretches the boundaries of legitimate self defense; the 419eater web site warns scambaiters to guard against providing scammers with any personal information and to avoid actually meeting scammers.

The web site has also had to distance itself from tactics encouraging scammers to wire money through to the scambaiters, because of the questionable legal status of such a transaction.

APC recommendation look, but don't touch www.419eater.com. APC

1





Snub the penguin at your own peril

With 2006 and 2007 set to be the years when Linux desktops are on the up-and-up, can you (or your business) really afford not to take a tinker?

Last month, I suggested that Linux was now positioning itself as a viable desktop alternative to Windows. Applications are available to allow the two operating systems to coexist, share resources and help productivity. I'm going to go out on a limb here and suggest that not only is the fledgling OS becoming a viable alternative, but, in many cases, is even preferred over its Redmond rival. And here's why.

Increasingly we are living in a world where the underlying OS is far less important than what you can get done with it. Cross-platform compatibility issues are slowly melting away and though some apps are only available on a specific platform, companies are finding ways around this. Apple's recent announcement of Boot Camp highlights the fact that — while OS X is technically a superior operating system to Redmond's offering — the lack of support means that Mac fans still have a need to run Windows.

Though it's possible to dual-boot Microsoft Windows and a Linux distribution to get access to Microsoft-only apps like Visio or Windows Media 10, there aren't that many business environments that

can make a substantial argument against running Linux. An enormous number of tools are available natively, and Linux users have a rich array of open source software to choose from. Granted, some tools are basic, but others are incredibly well developed and supported by the community. What's more, there is mounting evidence to suggest that open source software applications suffer fewer bugs than proprietary ones. This is largely due to the peer review system favoured by the open source community.

Quality open source software apps like OpenOffice, the GAIM

ADOPTION

Linux adoption is gaining traction in the workplace and Novell has already announced that 2007 will be the year of Linux on the desktop. Of course, the company has significant investment in Linux — but other major vendors are suggesting that Linux has already seen mainstream adoption in server environments and is now starting on the desktop. HP suggests that adoption should be part of a long-term strategy, but I personally feel that the time is coming sooner rather than later.

Microsoft has repeatedly delayed its next major OS release and it is still

same either way, but businesses adopting Linux will be freed from Microsoft's slow and often buggy software releases.

CHANGING TIMES

It's not all roses, though. Kaspersky Labs has recently announced that it has received proof-of-concept code that enables a virus to run under both Windows and Linux. The virus itself relies on low-level assembler code and is somewhat limited in the damage it can do, but it shows that it is possible to create a cross-platform virus. Windows has served as a target for hackers because of its enormous



THE TIME IS RAPIDLY APPROACHING WHEN ADMINISTRATORS AND POWER USERS ALIKE WILL HAVE TO PULL THEIR HEADS FROM THE SAND

universal instant messaging client Evolution and Firefox are now available to sit atop robust, industrial-strength OS code to provide a rich, stable environment. The endless patch cycle that plagues Windows system admins is largely avoided by those choosing to deploy Linux. What's more, the Unix clone's heavy reliance upon open standards and open document formats means that users are not locked in to a regular upgrade cycle whenever a proprietary software provider decides to upgrade file types (as has been seen over the years with the evolution of the Microsoft Word DOC format).

going to be almost a year before it will start to ship. Businesses that adopted Windows XP shortly after its release are now overdue for a hardware refresh. What's more, Microsoft has dramatically changed the way Office looks and feels which means businesses will inevitably have to shell out to retrain staff. This presents a unique opportunity for Linux to slip under the radar and be deployed by network administrators. If existing employees will have to be trained in order to use Microsoft Office 12, there is little to lose in moving to a new OS and deploying OpenOffice across the business. The training impact and cost will be the

popularity. As Linux becomes more prevalent in business environments, there will be an ever-increasing number of malicious code-writers focusing on it. The stakes are too high, and while 2006 and 2007 look to be the years of Linux on the desktop, I suspect that they will also be the years when Linux viruses begin to emerge *en masse*.

Only time will tell, but one point that can't be argued is that the time is rapidly approaching when administrators and power users alike will have to pull their heads from the sand and become familiar with it. (Your livelihood/status as an alpha geek could depend upon it.) **APC**



LinuxWindow

by
Matt Overington

Matt Overington is an operating system specialist and former technical editor of APC. He specialises in the interaction between Linux and Windows systems.

ASUS recommends Windows® XP Professional



ASUS (Webcam) Notebook Series

Wire-Free Video Communication for Unlimited Fun



Enjoy true wireless freedom with ASUS Webcam Notebook Series. Built-in webcam and microphone allow you to stay connected with family and friends without the hassle of external connections and tangling wires! ASUS W5F, A6Ja, A7Jc and V6J are powered by Intel® Centrino® Duo Mobile Technology giving you outstanding performance.



Built-in High Quality Webcam



W5F

- Intel® Centrino® Duo Mobile Technology
- Intel® Core™ Duo Processor T2300 (1.66GHz, 667 MHz, 2MB L2 Cache)
- Mobile Intel® 945PM Express Chipset
- Intel® PRO/Wireless 3945ABG Network Connection
- Microsoft® Windows® XP Professional
- 512MB DDRII 533/667MHz, up to 1536MB
- 12.1" WXGA Colour Shine & Crystal Shine LCD
- 80GB HDD
- DVD-Super Multi Drive Dual Layer
- 1.3M pixel web-camera
- 802.11b/g, Bluetooth V2.0+EDR



Colour Shine
Gloss Type Panel



A6Ja

- Intel® Centrino® Duo Mobile Technology
- Intel® Core™ Duo Processor T2300 (1.66GHz, 667 MHz, 2MB L2 Cache)
- Mobile Intel® 945PM Express Chipset
- Intel® PRO/Wireless 3945ABG Network Connection
- Microsoft® Windows® XP Professional
- 2x 512MB DDRII 533/667MHz, up to 2GB
- 15.4" WXGA Colour Shine LCD
- ATI Mobility™ Radeon® X1600 512MB Hypermemory
- 80GB HDD
- DVD-Dual with Dual Layer and LightScribe
- Built-in 1.3 Megapixel Camera
- 802.11b/g, Bluetooth V2.0+EDR



Colour Shine
Gloss Type Panel



A7Jc

- Intel® Centrino® Duo Mobile Technology
- Intel® Core™ Duo Processor T2400 (1.83GHz, 667 MHz, 2MB L2 Cache)
- Mobile Intel® 945PM Express Chipset
- Intel® PRO/Wireless 3945ABG Network Connection
- Microsoft® Windows® XP Media Centre Edition
- 2x 512MB DDRII 533/667MHz, up to 2GB
- 17.1" WXGA Colour Shine LCD
- ASUS Splendid™ Video Intelligence Technology
- ATI Mobility™ Radeon® X1800 256MB GDDR3
- 100GB SATA HDD
- DVD-Dual with Dual Layer and LightScribe
- Built-in 1.3 Megapixel camera
- Hybrid TV
- 802.11b/g, Bluetooth V2.0+EDR



Colour Shine
Gloss Type Panel



V6J

- Intel® Centrino® Duo Mobile Technology
- Intel® Core™ Duo Processor T2400 (1.83GHz, 667 MHz, 2MB L2 Cache)
- Mobile Intel® 945PM Express Chipset
- Intel® PRO/Wireless 3945ABG Network Connection
- Microsoft® Windows® XP Professional
- 2x 512MB DDRII 533/667MHz, up to 2GB
- 15" SXGA+ ZBD LCD
- 120GB HDD
- DVD-Dual with Dual Layer and LightScribe
- Nvidia GeForce Go7400
- 512MB TurboCache®
- 10/100/1000 Ethernet
- 802.11b/g, Bluetooth V2.0+EDR



Colour Shine LCD ZBD
Gloss Type Panel Zero Bright Out



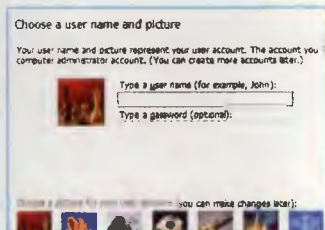
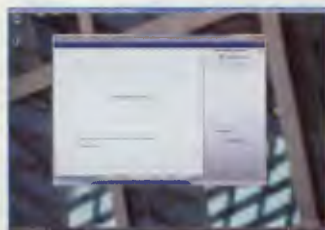
2 Years
Global Warranty

2 Years Australia Wide
Pickup & Return

ASUS
Rock Solid • Heart Touching

Call 1300 ASUS 88 www.asus.com.au

Intel, the Intel logo, the Centrino logo, and Centrino, are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.



Alright stop, collaborate and listen

We got our hands on the 5308 build of Vista Beta 2 and decided to investigate some of the ways in which Vista will help you work and share information.

Windows Collaboration is a new tool which leverages off a feature called "People Near Me" (PNM) — essentially peer-to-peer (P2P) technology which allows users to sign in and browse the local network for other signed-in PNM users. It's similar to the Computers Near Me feature in Windows XP networking, but is more than a browsing tool. It lets users share info and collaborate on projects, hence "Windows Collaboration".

Launching Windows Collaboration for the first time prompts you to enable File Synchronisation, open the appropriate Windows Firewall ports and sign into People Near Me. In a PNM network, other users can see your display name, your computer name and IP address. Once you've signed in, you can launch the Network Center and browse the network to see which other computers are in your vicinity. Bear in mind that, by default in Vista, Windows Firewall is configured to block network browsing and

responding. PNM launches an icon in the system tray which gives you control over your profile, sign-on status and various options.

At the Windows Collaboration screen — if you're the inviter — click Start a new session. The default session name is your computer name plus the time. You need to assign a password to the session (which then needs to be manually distributed to anyone wishing to join the session). Under options, you can select to set up an ad hoc private wireless network. This is a terrific tool for a team of mobile users. It keeps communication private and doesn't interfere with the client's infrastructure.

Once the session is started there are a number of options — you can start a presentation, invite people or create a handout. Choosing to invite people, you get a list of people currently signed in to PNM (and likewise, people signed in and using Windows Collaboration can see your new session). Select those you wish to invite and select Send Invitation. Alternatively, remote users can select to join your session — they simply need to enter in the password.

SHARE YOUR TOYS

Once your invitees are all connected, you can start a presentation. In the

context of Windows Collaboration, a presentation means visual desktop sharing. You can, however, restrict the presentation to one application. This is useful if you are only looking at one particular program, as you can still navigate around your machine without everyone seeing what you're up to. The presenter can check to see how his presentation is appearing to the session members — a very convenient feature.

Interestingly, when you are presenting, the Aero Glass visual effects are turned off. Presumably, trying to render that across the network would cause unacceptable session performance as well as put undue strain on the host machine.

The presenter can also give out handouts. A handout is a file that you browse for (which is copied to each individual machine). One invitee at a time can make changes; these are then reflected in every other shared copy except in the original file.

POWER OF SIMPLICITY

Windows Collaboration is a very useful meeting tool for remote users — if you're talking to someone on the phone and would like to show them what you're talking about, you can have a session up and running in no time at all.

There's also a limited support functionality. Technical staff can set up a session to show a user how to perform a particular task — in this sense, Collaboration plays a reverse role to Remote Desktop. You invite the user to connect to you, rather than have them invite you.

With many tools, network administrators have to be especially wary. Utilities are often created with the aim of improving user communications — and then administrators discover that there is a pressing reason not to use it (excess background network traffic, security, confusing user interface and so on). It's quite safe to say that Windows Collaboration is not such a program. Its simplicity and effectiveness cannot be overemphasised. True, it doesn't have some of the more powerful sharing features that other private P2P applications have, but it will more than likely meet the needs of most users.

The only consideration which network admins may need to bear in mind is that of security. Windows Collaboration leverages strongly off Windows Firewall, which may need to be locked down quite hard for mobile users — there is no point in having P2P collaboration while leaving a company laptop wide open.



HastalaVista

by
James Bannan

James Bannan is a systems manager at St Leonard's College (Vic) and APC's resident Windows expert. He'll be checking out Vista for you every month.

PowerColor



ATI AVIVO

The world's fastest GPU

Prepare for the future of games with the Radeon® X1900—the fastest consumer 3D graphics processor on the planet. With its ultra-threaded engine and unparalleled shader performance, the Radeon® X1900 delivers maximum graphical detail at the best possible frame rates. Go beyond games with Avivo™ technology to watch stunning HD video and view digital photos in vibrant detail with over 1 billion colors.

PowerColor X1900 Series



PowerColor X1900 CrossFire Edition
GameFX Board Series



PowerColor X1900 XTX
GameFX Board Series



PowerColor X1900 XT
GameFX Board Series



Proudly Distributed by

Australia IT

TEL: 1300 668 715

VIC: (03) 9560 3188 NSW: (02) 9643 1388

<http://www.australiait.com.au>



EndUser

from
The readers of APC

APC readers who deal with new computer users or incompetent IT administrators share their survival stories.

Putting the ass in password

Lauren Haynes, APC reader, has been working in IT (Service Desk/Desktop support) for about five years now — and has brought this exchange to our attention. (The user's name has been changed to jsmith):
Lauren: Helpdesk, this is Lauren.

User: Yes, I've just started with the company and I'm having problems logging in. It is not accepting my username and password.
Lauren: OK, so you are logging in with jsmith as your username and password as the password?
User: No. My username is password.

Lauren: No. Your username is jsmith. The format we use here is the first initial of your first name and the first seven characters of your last name.
User: No. I have the details right here and the username is definitely password.
Lauren: Does your first name

start with a P?
User: No.
Lauren: Is your last name assword?
User: NO!
Lauren: Then trust me, your username is jsmith.
User: <short silence> OK.
<hangs up the phone>

Taking the OS out with the trash

One admission that strikes fear into any IT support person is when the end user says, "I've removed some unnecessary files". Developer and APC contributor Tim Buchalka recalls: "I'd installed a computer for

a client. One day I got a call from him saying he was extremely upset that the computer was not working (and that it was obviously a faulty computer). While I was trying to talk him through the problem on the phone, he casually

mentioned that he had cleaned up some "unneeded files" in the C:\ Windows directory (because they were taking up a bit too much space). Turns out he had pretty much wiped out most of Windows (before it had locked up on him!).

Needless to say the computer worked perfectly after Windows had been reinstalled on the machine. The annoying thing is, I was never able to totally convince him that it was his fault — he still blamed the computer."

The Outlook is bleak, so sayeth Copernicus

Acertain long-suffering corporate IT support manager (who wishes to remain anonymous for fear of recriminations from his users) tells of one user who rang him in a panic from home, claiming her Outlook's new message icon was missing: "The user was flipping out because she needed to send a very important email. She was literally screaming at me as if it were IT's fault. I asked her to describe the

inbox and the emails themselves. They were definitely Outlook emails that she could see and open, with all the standard functionality, but there was definitely no "New Mail Message" button in the top left corner of the inbox. I was stumped, until I asked her to read out what menu icons she could see, and eventually heard her say, "Copernic Desktop Search." It turns out her boyfriend had installed Copernic on

her company laptop the day before and she'd opened it by mistake. Although the Copernic email search interface is *vaguely similar* to the Outlook inbox, she could not tell the difference. She quickly apologised and hung up."

But it's not just dumb users that raise the temperature of this support manager. He's just as scathing about bad techies. One example is the tech who set up every user on the

network as a local administrator — because when someone logs in for the first time Word has to install some components and it can't do that if they're not the administrator: "Never mind the fact that if the dumbasses had been shown how to install Word properly — ie. a custom setup where all the "install on first use" options are set to be installed from the onset — the problem would not exist."

WINNERS!

Send your tales involving dumb end users or incompetent techies to pcenduser@acpmagazines.com.au, and if we print it, you'll win a prize. You must supply contact details in order for us to verify your contribution.

This month's published writers each win a cool Robot Dog Webcam from Anyware Computers. The Robot Dog Webcam offers 300,000 pixel resolution; max resolution 640 x 480; 24-bit real colour, VGA/CIF format (audio format); 3cm-infinity/normal imaging distance and 360 degrees viewing angle. RRP: \$29. More info at www.anyware.com.au or 1300 ANYWARE: 1300 269 927.



ADSL2+

The new standard for high speed Internet.

UP TO 24Mbps - 16 TIMES FASTER THAN 1.5Mbps ADSL

Plan	Xlite	Lite	Medium	Heavy	Premium	Premium Plus
Monthly Download Quota	600MB#	6GB*	18GB*	30GB*	50GB*	100GB*
Shaping	64k/64k	128k/128k	128k/128k	256k/256k	256k/256k	256k/256k
Monthly Charge	\$29.99	\$39.99	\$49.99	\$59.99	\$89.99	\$129.99



Broadband setup: \$59.95

From **\$29.99[^]** MONTHLY



www.tpg.com.au

1800 360 855

#600MB free, then 15c/MB, max download charge \$30. Speed shaped once 10GB is reached. *Speed shaped when monthly download quota is reached. ^Total minimum cost over 12 months contract term for Xlite plan is \$419.83 (includes set up cost of \$59.95 and excludes modem cost). Prices are subject to change without notice. Full terms and conditions apply. Check TPG website at www.tpg.com.au for details and availability. Download speed of ADSL2+ is up to 24Mbps and upload speed is up to 1Mbps. TPG Internet Pty Ltd ABN 15 068 383 737.

SHDSL PREMIUM BUSINESS NETWORK **Price crash!**

\$199⁺ per site monthly

1Mbit/1Mbit connection (1:1)

Free trunking

Available in Sydney Melbourne Brisbane Adelaide Perth

+ Prices are exclusive of GST and installation.

Call TPG on 1300 659 412 or email corpnet@tpg.com.au for more details.

Dealers welcome



watchdog@acpmagazines.com.au

Has an IT vendor or telco stuffed you around?

Let us know about it and we will chase them for a solution on your behalf. Letters sent to watchdog@acpmagazines.com.au must include the writer's full name, suburb, state and

phone number to be considered for print publication and please also include details such as invoice numbers and people you've spoken to. Phone details will not be published.



The great disconnect

Andrew Birkett's phone line and broadband internet went down... for three months. Optus blamed Telstra and claimed nothing could be done — but, as Dan Warne discovered, there was more to the story.

During November 2005, my home phone line had outages three times, each one lasting two days. Optus' faults department told me that my exchange was being upgraded by Telstra and there was nothing it could do to fix or pre-warn us of the outages.

In December, there were more outages. I reported the matter to the Telecommunications Ombudsman, which referred me to Optus' department for serious complaints. Optus' response was to credit my bill \$86 and tell me the fault was fixed.

Later in December, the line went down again. I called the serious faults department again and they promised someone would call. Four hours later I hadn't heard, so rang the regular Optus faults department which promised to arrange a technician to check the line the next day. I left on a two-week holiday and double-checked they wouldn't need internal access to the house. A week later Optus called saying the line was repaired.

I returned from holidays on 9th January to discover the phone had no dial-tone. My broadband internet from TPG was also down. I rang Optus' serious complaints dept again as well as the TIO, which advised it would launch an investigation into the matter. Optus didn't call back and I called again on the 10th and 11th, with no return phone calls. Finally, I got through to them late on the 11th and was told the person handling the matter

would call me back. They called on the 12th and told me the matter was in Telstra's hands and the line could not be fixed until 23rd January — due to a major problem at the exchange, with parts having to be ordered. I reluctantly agreed to this and, after some complaining, Optus agreed to divert the landline phone to my mobile and cover the diversion costs.

I checked my phone every day and it still wasn't working on 23rd January. I called Optus late in the day and couldn't get a straight answer. Five days later it called and said I wouldn't have a phone until 23rd February — as the roads had to be dug up in order to fix the problem.

I was fed up at this stage and rang Optus' head office. I was put through to a male who did not fully identify himself and said he hears hundreds of complaints like this but there was nothing he could do to help me as Telstra was to blame. I asked him if there was someone in Optus who dealt directly with Telstra on these sorts of issues and he said no. I asked to speak to his manager and, initially, he refused to transfer me. At this point the discussion became heated and eventually he put me through to Margaret Robinson, manager of Optus Customer Relations. She advised I would just have to wait until the phone was fixed. I asked who her manager was and she said she reported directly to the CEO. She said the issue

had been escalated as far as it could go and that she would have someone called John call me. I have never had a call back.

To cut the rest of the sorry story short, Optus has now said the line won't be repaired until 17th March (at the earliest).

Until this event, I was happy with Optus, being a customer for five years at this address.

**Andrew Birkett
Horningssea Park, NSW**

Watchdog referred Andrew's complaint to the general manager of Optus Media Relations and asked her to work with the appropriate people at a high level to get a resolution sorted out. APC suggested that, since Optus is a major provider of satellite services, the least it could do would be to provide a temporary satellite phone line due to the incredible amount of inconvenience Andrew had gone through. She organised for the issue to be investigated and a spokesperson (who asked not to be named) then responded:

Dear Watchdog,

Due to major structural issues in the area outside Optus' control, a landline connection to Mr Birkett's house is currently not possible. The infrastructure is undergoing major work while being replaced by Telstra. In the meantime, Optus is diverting all landline calls to Mr Birkett's mobile at no cost and Mr Birkett will be recompensed for his

inconvenience, under the Optus Customer Service Guarantee, when his landline is reconnected.

Optus sincerely apologises to Mr Birkett for this inconvenience and believes infrastructure replacement is the best long-term solution to Mr Birkett's problem.

Optus spokesperson

We didn't consider Optus' response satisfactory, but Optus dug in its heels, saying not much else could be done — and that a satellite service wasn't a practical option.

Although Andrew is an Optus customer, we contacted Telstra, which provides and maintains the copper phone line infrastructure.

Telstra spokesperson Liz Jurman apologised for Andrew's phone line outage and said that his line was fixed as soon as Telstra became aware that there was a problem via Watchdog.

"It has now been connected to a temporary cable, pending the installation of a new cable," she said.

Jurman said Optus had provided Telstra with the incorrect address details for Andrew's service and then failed to follow the correct escalation process, so that Telstra believed the problem had been fixed.

Jurman said if Optus had supplied the correct details for Andrew's line — or escalated the problem properly — the problem would have been resolved much sooner.

APC gave Optus an opportunity to defend these claims but Optus did not respond.



◀ Makes you wonder what LG's dead pixel policy is.

replacement. Since then, all attempts at getting my monitor back have yielded no results; despite GES sending fresh replacement requests, LG have not responded.

This has left me feeling angry, frustrated and helpless.

Marina Cuenca
Liverpool, NSW

Dear Watchdog,

LG's customer service manager has determined that a processing error in our automated job system was the cause for delay in actioning Ms Cuenca's request. After learning of Ms Cuenca's situation, a check of our internal system revealed a processing error. As a result, LG has resolved the problem and provided her with a replacement monitor.

Our priority at LG is to always ensure we provide our customers with the best possible products and the highest standards of customer service, both before and after sale. LG regrets the inconvenience caused to Ms Cuenca and urges any other customers facing similar turnaround issues to contact our customer support team.

If Ms Cuenca has any further problems, our customer support team is always available and will endeavour to assist her. The telephone number is 1800 643 156.

Janelle Dilger
IT Category
Marketing Manager
LG Electronics Australia

Marina confirmed that "the replacement monitor arrived Friday afternoon delivered by an LG employee, instead of making me wait for a courier to deliver on Monday."

But, she is disappointed it took media involvement to get her monitor back from repair. "What amazes me, perhaps even makes me a little angrier, is that they responded only after having received a prod from Watchdog."

"Once again, thank you very much, the service you render to frustrated consumers such as myself is invaluable — once all normal avenues of redress have been expended," Marina said.



I AM AT MY WIT'S END AFTER SPENDING THE LAST EIGHT MONTHS TRYING TO GET MY MONITOR BACK FROM LG

THE LIGHTS ARE ON BUT NO-ONE'S ANSWERING THE PHONE

Reader David Nyssen of Brisbane, Queensland, is fed up with tech support delays when troubleshooting clients' PCs.

"Take, for example, Netcomm and Symantec," he writes.

"Netcomm mentions that they are too busy to take calls at the moment and to ring back later. This message has been in place for at least a week."

"Symantec support is also really bad. Their phone system inevitably warns of high call volume and, after all the prompts, dumps you to an engaged tone. This has happened on three occasions recently."

Nyssen also supports clients who pay for Symantec "gold" support for Symantec Enterprise Server and he says delays can be up to 20 minutes to get through.

We took David's concerns to both Netcomm and Symantec.

Netcomm marketing manager Michael Fitzgibbon said the

company recognised call wait times had been an issue and they had recently commissioned independent experts to analyse Netcomm's support service.

"They found our technicians were providing excessive levels of support for PC hardware and operating system configuration issues that are not normally covered by our service, resulting in longer call times," he explained.

Fitzgibbon said Netcomm was currently recruiting more tech support personnel, training tech-support staff on how to process calls faster and increasing self-help resources for customers, as well as improving communications to customers about Netcomm's existing self-help resources online.

"NetComm is committed to ensuring every customer enjoys the full benefit of our products and apologises to customers who may experience delays as we endeavour to improve our Tech Support service," he said.

Meanwhile, Symantec acknowledged it was having

problems. "We are aware that customers occasionally experience unacceptably long delays when contacting our customer service and technical support operations," a spokesperson said.

Symantec apologised to customers for the inconvenience. "We thank our loyal customers for their patience. Symantec is constantly monitoring its service and support operations and takes steps to correct the situation whenever delays occur."

The company suggested customers look at online help as a first step before calling support.

EIGHT-MONTH WARRANTY REPLACEMENT?

I am at my wit's end after spending the last eight months trying to get my monitor back from LG after it was sent away for replacement under warranty.

The monitor was taken to an LG service centre (GES Liverpool, NSW) after it had ceased functioning. After inspecting the monitor, GES sent a request to LG for a



epinions@acpmagazines.com.au

Add to these discussion threads or email your views (in fewer than 250 words) to epinions@acpmagazines.com.au. All correspondence becomes the property of APC and is subject to editing.

Letters which are sent must include the writer's full name, suburb, state and phone number to be considered for print publication and to be in the running for Letter of the Month prizes. Phone details will not be published.

A WOLF IN XP'S CLOTHING

Jeff Funnell asks who is to blame for the lack of 64-bit drivers, and correctly answers: the vendors (APC April, page 34). A more important question, though, is who is to blame for my devices not working on XP 64 (and that, unfortunately, is Microsoft).

Microsoft could have easily released XP 64 with a 32-bit wrapper for the device drivers — so that existing devices would continue to work (while 64-bit drivers were developed).

As it was, it chose not to, precisely because there was very little support. Microsoft wanted a reasonably full set of 64-bit drivers for its upcoming Vista release, but vendors were slow to react. The solution? Release XP 64 and refer all complaints back to the vendors — to pressure them to write the 64-bit drivers they would need for Vista.

Why else would "XP" 64 be based on the Windows Server 2003 code base (as is Vista), rather than the XP code base? (A decision that

would require the rewriting of the drivers rather than a simple port of the code.)

Gregory Bradley
Shailer Park, Qld

THE SMARTEST GUYS IN THE ROOM

Peter's problems with Telstra (APC April, page 36) are not surprising. After 24 years with Telstra, in 2004, I (along with several colleagues) was given a forced redundancy. We were all technical specialists for the various computer-based products we maintained. Of course, those who now manage Telstra did not take the time to know what we did. Most of these products are now in trouble — no-one knows how to support them. I still have friends there who have had this dumped upon them — it is not their fault

that they cannot help customers. Of course, the Government is at least 51 per cent to blame — to act as if it has no control over this situation defies belief. While Telstra exists, we will continue to have substandard, overpriced broadband and telephone services. Imagine what will happen when another 12,000 good workers get axed.

Tony Joyce
Macquarie Fields, NSW

ON THE DEFENSIVE

In response to Frederik Wentzel's comments (APC April, page 34) about antivirus programs hogging resources, I encourage him to try NOD32. Currently, on my system, it is using 20MB of RAM — which is quite reasonable. It is simple to use, doesn't require user intervention anywhere near as much as some

other vendors' products — and its virus-detection capabilities are excellent. Whenever friends are having problems with their computers running slow, I remove the demo version of Norton that comes with their computer, install the demo of NOD32 and encourage them to purchase a licence.

Peter Blackford
New Lambton Heights, NSW

INTELLIGENT DESIGN CONTROVERSY!

Hello Microsoft! Could you prevail upon your clever file system designers to spend a bit more time on an intelligent file-copy arrangement? I mean, when I set up a copy process to transfer 861MB of MP3 files from my hard disk to my personal audio player — and then go outside to cut up some fallen



MICROSOFT WANTED 64-BIT DRIVERS —
THE SOLUTION? RELEASE XP 64 AND REFER
ALL COMPLAINTS BACK TO THE VENDORS

letter of the month**DRM A LITTLE DRM**

Digital rights management (DRM) is a topic that is causing much debate these days. In my opinion, it is just the latest example of corporate greed.

For as long as I can remember, people have been able to copy music. In the seventies, people were copying their vinyl records to cassette tapes. Almost everybody I knew was doing it; not for profit — they simply wanted their music available in a convenient format.

After all, it is a little hard to take a record player with you in the car! Others merely wanted to make compilations of their favourite songs or to protect their original vinyl records from damage.

It's not hard to see the parallels with the situation that exists today. The vast

majority of people merely wish to make copies for convenience or as a backup rather than for profit. The only thing that has changed is the technology involved: CDs and DVDs instead of LPs, iPods instead of Walkmans.

But now, the major distributors are trying to prevent us from using the music and movies we've legitimately purchased in the way we want to use it.

Sometimes these very same companies are trying to have their cake and eat it too — doing everything they can to prevent people copying content and at the same time quite happy to profit from the sales of CD and DVD writers, MP3 players, standalone DVD recorders and blank media.

Don't get me wrong; I don't support piracy. In fact, I own over 200 original DVDs

and I only buy original software. I have no problems with people legitimately trying to protect their work from large-scale piracy, but the corporate giants are going too far. I urge people to express their disgust at the tactics these companies are using. Write to your local member of parliament and to the companies themselves. Whatever you do, don't just sit back and do nothing!

Brett Marshall
Indooroopilly, Qld

Good point, Brett — we often wonder what happens when the record label wing meets up with the media writer division at Chrissy drinks.

Brett wins this month's Letter of the Month prize, a Logitech MX3000 cordless laser mouse and keyboard set, valued at \$179.95.



64-bit drivers? 32 driver bits?
Who's to blame for this screw-up anyway?



trees with my new Stihl MS 660 Magnum — I don't want to come back two hours later to see this message on the screen:

Confirm file replace?

This folder already contains a file named "_____".

Would you like to replace the existing file (etc)....

YES/NO

It should not be beyond the ken of the MS crew to alter this scenario in such a way that the YES/NO question stays up for say, five minutes? If it is not answered in this time, the file gets tagged and the copy process proceeds without it. Any similar "obstacles" are similarly dealt with.

The "tagged" files are then queued to the screen in sequence *after* the rest of the copy process has run its course. Howzat?!

While looking for things to make my life easier as I approach the big Seven-O, I could do with a gadget that programs the image of a hen into a chip, then compares the stored image with that of, say, a goanna lurking up to the henhouse entry flap — and properly denies it access!

This way, I don't have to keep an eye on the screen and on the chookhouse door simultaneously to prevent illicit egg gobbling...

Anyone out there feel challenged to come up with a circuit? I could build it, even if I can't design it!

Luis M. Huesch
Charlotte Bay, NSW

THIRD CUT IS THE DEEPEST

I thought I'd be on the cutting edge of technology when I bought my 64-bit machine. I put together the AMD Athlon

64 3500+ with 2GB of RAM and a 128MB GeForce 6600 graphics card, expecting that it could handle anything I threw at it. Except an OS. I'm very disappointed with the lack of drivers and support for 64-bit machines from both Microsoft and software vendors — so much so that I've abandoned my 64-bit system and have turned to a dual-processor Xeon system. The extra processing power provided by the second processor is a great performance boost, and the fact that I'm still using x86 architecture means I have all the compatibility I require. Gentoo Linux is my OS of choice and performs very well indeed!

So, my advice to readers is to always consider the third option: there are other ways to upgrade which do not involve moving to 64-bit architecture.

Justin Cataldo
Kirwan, Qld

PRIVACY NOTICE

This issue of APC published by ACP Magazines Pty Ltd (ACP) may contain offers, competitions or surveys which require you to provide information about yourself if you choose to enter or take part in them (Reader Offer). If you provide information about yourself to ACP, ACP will use this information to provide you with the products or services you have requested, and may supply your information to the contractors who help ACP to do this. ACP will also use your information to inform you of other ACP publications, products, services and events. ACP may also give

your information to organisations that are providing special prizes or offers and that are clearly associated with the Reader Offer. Unless you tell us not to, we may give your information to other organisations that may use it to inform you about other products, services or events, or to give to other organisations that may use it for this purpose. If you would like to gain access to the information ACP holds about you, please contact ACP's Privacy Officer at ACP Magazines Pty Ltd, 54-58 Park Street, Sydney NSW 2001.

apc

EDITORIAL

Editor Tony Sarno tsarno@acpmagazines.com.au
Deputy Editor William Maher wmaher@acpmagazines.com.au
News and Online Editor Dan Warne dwarne@acpmagazines.com.au
Ads Editor Nick Race nrace@acpmagazines.com.au
Technical Editor John Gilooly jgilooly@acpmagazines.com.au
Journalist Dan Chiappini dchiappini@acpmagazines.com.au
Contributors James Bannan, Tim Bulchaka, Seamus Byrne, Anthony Caruana, Jeanne-Vida Douglas, Mary Jo Foley, Tim Gaden, Brendan Gregg, Angus Kidman, Patrick Kirsch, Matt Overington, Ben Parkes, Peter Sbarski, Adam Turner, Daniel Winter, Paul Schnackenburg, Simon Sharwood, Jarrod Spiga, Adam Turner, David Williams, Stephen Withers.
Editorial Coordinator Helen Chen hchen@acpmagazines.com.au
Marketing Coordinator Kiera Kelly kkelly@acpmagazines.com.au

DESIGN

Art Director Chris Zammit
Deputy Art Director Troy Coleman
Photography Getty Images, Troy Coleman, Chris Zammit

PRODUCTION

Chief Sub-Editor Melanie Farr
Sub-Editor Peter Dockrill
Production Controller Peter Woodward

MULTIMEDIA

DVD Editor Lachlan Grant lgrant@acpmagazines.com.au
Web and Database Manager Declan Kennedy dekennedy@acpmagazines.com.au

ADVERTISING

NSW Advertising Manager Janice Tong
jtong@acpmagazines.com.au (02) 9288 9143
Account Manager Alex Vella
avella@acpmagazines.com.au (02) 8268 4662
Account Manager David Lipman
dlipman@acpmagazines.com.au (02) 9288 9157
For further advertising information visit
www.apcmag.com/advertising

MARKETING

Marketing Brand Manager Lisa Newell

ACP

Designer in Chief Glen Smith
National Advertising Sales Director — Corporate Jenny Hosie
Associate Publisher Michael Koslowski
Group Publisher Phil Scott
CEO John Alexander

CONTACTING US

Email apc@acpmagazines.com.au **Web** www.apcmag.com
Phone (02) 9288 9111 **Fax** (02) 9267 4909
Postal PO Box 4088, Sydney NSW 2001
Street Level 9, 175-183 Castlereagh Street, Sydney 2000

For Watchdog and Opinions

You must include your full name, address and B/H contact telephone number, otherwise it cannot be considered for publication.
watchdog@acpmag.com opinions@acpmag.com
For DVD support dvd@acpmag.com

REPRINTS AND COPYRIGHT

Contact Kiera Kelly **Phone** (02) 9288 9105
kkelly@acpmagazines.com.au

SYNDICATION ENQUIRIES

London John Slater
Phone 44 20 7812 6527 **email** jslater@acpuk.com
Sydney Greg Allen-Waters
Phone 612 9282 8808 **Email** gallen-waters@acpmagazines.com.au

SUBSCRIPTIONS AND BACK ISSUES

Phone 13 61 16 **Email** magshop@magshop.com.au or visit magshop.com.au

One year's subscription is just \$79.95! For full details see page 34

PRODUCT SUBMISSIONS

APC wants to hear about product releases and announcements. However, APC is under no obligation to review or return unsolicited products.

APC is published by ACP Tech, a division of ACP Magazines Pty Ltd (ACN 053 273 546). Printed by Webstar. Material contained within APC is protected under the Commonwealth Copyright Act 1968. No material may be reproduced in part or in whole without the written consent of the copyright holders. Distributed by Network Distribution Company, 54 Park Street, Sydney NSW 2000. Phone: (02) 9282 8777

SAVE AND WIN!

SUBSCRIBE to APC today for your chance to WIN 1 of 3 Brother Colour Laser Multi-Function Centres valued at \$1,599 each!

Phone 13 61 16 and quote "M606APC" or subscribe online at www.apc.magshop.com.au

Save over \$35 by subscribing now. Receive 12 issues for only \$79.95.

SUBSCRIBE TO APC MAGAZINE AND ENJOY THE BENEFITS:

NEVER

miss an issue

FREE

home delivery

SAVE

\$35 off the newsstand price[#]

PLUS

the chance to win WIN 1 of 3 Brother Colour Laser Multi-Function Centres valued at \$1,599 each!



[#] Saving based on newsstand price of \$9.95 per issue.



Brother's new Colour Laser 5-in-1 Multi-Function Centre, the MFC 9420-CN, is the smartest solution for your office environment, no matter what size company you work in. It offers these five great features in one:

- 1. Super-fast colour laser printing (31ppm, mono; 8ppm, colour)**
- 2. Super G3 33.6Kbit/s fax**
- 3. Flatbed colour copying**
- 4. Quality colour scanning**
- 5. Convenient PC Fax — so you can send a fax direct from your computer**

Other benefits of the MFC-9420CN include:

- User-friendly network software which makes it easy to install onto any existing system.
- Ergonomically-designed control panel and front loading consumables for ease of use.
- Plus, for those who want to work smarter, it offers the flexibility to upgrade paper capacity and memory.
- Long life consumables that ensure competitive total cost of ownership.

CONDITIONS OF ENTRY 1. Information on how to enter and prize details form part of these conditions of entry. 2. Entry is open to all residents of Australia who subscribe or renew their subscription to APC magazine between 10/05/06 and 13/06/06. Entry is automatic upon and subject to the correct use of a valid credit card or, if payment is made by cheque, subject to the cheque being cleared for payment during the promotional period. Subscriptions are to be sent by mail to APC magazine, Reply Paid 3357, Sydney, 2001; or made by telephone on 13 61 16; or via the internet at www.apc.magshop.com.au. Employees of the Promoter and their immediate families and agencies associated with this promotion are ineligible to enter. This promotion is not valid in conjunction with any other promotion or offer. If the subscription is a gift, only the gift recipient will be entered into the prize draw. 3. The Promoter reserves the right to verify the validity of entries and to disqualify any entrant who tampers with the entry process or who submits an entry that is not in accordance with these Conditions of Entry. 4. There is a limit of one entry permitted per subscription or renewal to APC Magazine. 5. Promotional period commences 10/05/06 and closes 23:59 EST 13/06/06. The draw will take place at 11:00 EST at 54-58 Park Street, Sydney NSW 2001 on 27/06/06. The winners will be notified by mail (using contact details provided in the subscription) and their names will be published in the Public Notices section of The Australian on 12/07/06. Judges' decision is final and no correspondence will be entered into. 6. The first three (3) valid entries drawn will each win a Brother Colour Multi-Function Centre MFC-9420CN valued at \$1,599 each. 7. The total prize pool is valued at \$4,797. The Promoter accepts no responsibility for any variation in the prize value. Prizes are not transferable or exchangeable and cannot be taken as cash. 8. If the winner of the prize is under the age of 18 years, the prize will be awarded to the winner's nominated parent or guardian. 9. In the event that a prize(s) is/are not available, the Promoter reserves the right to substitute prize(s) in its discretion to the same and equal recommended retail value and/or specification subject to any written directions from the various Lottery Departments. 10. The Promoter may conduct such further draws at the same time and place as the original draw as are necessary on 27/10/06 in order to distribute any prizes if unclaimed by that date subject however to any written directions given under Reg 37 of the Lottery and Gaming Regulations 1993 (SA). In the event of any winners in the unclaimed prize draw, their names will be published in The Australian on 13/11/06. 11. The Promoter shall not be liable for any loss or damage whatsoever which is suffered (including but not limited to indirect or consequential loss) or for any personal injury suffered or sustained in connection with the prize except for any liability, which cannot be excluded by law. 12. The Promoter accepts no responsibility for late, lost or misdirected entries. The Promoter accepts no responsibility for prizes damaged in transit. 13. Maximum cost of 13 call will not exceed 55c including GST. Mobile phones may attract a higher rate. 14. Any costs associated with accessing the promotional website is the entrant's responsibility and is dependent on the Internet service provider used. Any contact details entered incorrectly on the website shall be deemed invalid. 15. The Promoter is not responsible for any incorrect or inaccurate information, either caused by the phone user or website user or for any of the equipment or programming associated with or utilised in this competition, or for any technical error, or any combination thereof that may occur in the course of the administration of this competition including any omission, interruption, deletion, defect, delay in operation or transmission, communications line or telephone, mobile or satellite network failure, technical problems or traffic congestion on the Internet or website, software failure, theft or destruction or unauthorised access to or alteration of entries and any injury or damage to participants or any other person's computer related to or resulting from participation in or down-loading any materials in this competition. 16. If for any reason this competition is not capable of running as planned (including but not limited to) infection by computer virus, bugs, tampering, unauthorised intervention, fraud, technical failures or any other causes beyond the control of the Promoter which corrupts or affect the administration security, fairness, integrity or proper conduct of this competition, the Promoter reserves the right in its sole discretion to disqualify any individual who tampers with the entry process, and, subject to any written directions given by the various Lottery Departments, to cancel, terminate, modify or suspend the competition. 17. All entries become the property of the Promoter. 18. The collection, use and disclosure of personal information provided in connection with this competition is governed by the Privacy Notice (see contents page for location in this issue). 19. The Promoter is APC Magazines Limited (ABN 18 053 273 546) of 54-58 Park Street, Sydney, NSW 2001. Authorised under NSW Permit No. TPL06/3552, ACT Permit No. TP06/1344, SA Permit No. T06/1357.



From inside the Lab... Rediscovering cables

Bottlenecks are the bane of a PC user's existence. Tech companies throw money at minimising them within the PC, and major advances over recent years such as Hyper-Threading and SmartCache have been designed from the ground up to minimise the slowing influence of other parts of the PC.

This is why it astounds me that

the notion of wireless networks being superior to wired networks exists. In terms of performance and reliability, wired reigns supreme.

I've just spent six months with my home PC connected to my server via an 802.11g connection. It was infinitely more convenient than snaking CAT-5 cabling through the house — and heck, if networking companies saw 802.11g as an OK standard to run an MPEG-2-based media extender on then bandwidth should be pretty reliable. But more importantly, I wanted to see just how much different the experience was to that with which I was familiar.

Suffice to say, the experience has completely soured me on Wi-Fi in the home for anything but low-

bandwidth usage like web surfing and email. For me, the point at which I snapped (and snaked blue cabling through the house) came just after the realisation that the file shuffling my flatmates and I were doing was via DVD-Rs and USB memory keys. We had a wireless network — but shuffling a 100MB video file would take ages and hamper the networking performance of others in the house.

There is a reason why Intel's Viiv spec includes a Gigabit Ethernet card, yet its Centrino products are wireless. This push towards digital media consumption, especially of the high-definition variety, requires large data files and increased bandwidth. Wi-Fi is great for downloading your email in an airport

lounge or getting internet access from McDonalds, but move into the home and it's often quicker to zip a file onto a memory key — and throw it out the window to someone downstairs.

As Dan Warne's testing shows this month (page 52), most wireless routers don't have enough bandwidth to tax an ADSL2+ connection, despite the theoretically higher throughput.

As we move ever closer to the "digital home", we need to be aware of what that actually means. It's not just plugging your stereo into your PC — it's creating a network over which you will be shuffling large data files. Wi-Fi struggles already with this load and is only going to get worse as the move to high definition is accompanied by a serious increase in file sizes. [ETTC](#)



SUFFICE TO SAY, THE EXPERIENCE
HAS COMPLETELY SOURED ME ON
WI-FI IN THE HOME

JOHN GILLOOLY — APC TECHNICAL EDITOR

FIRST
LOOK

SAS technology from Adaptec, Maxtor and Seagate

A SCSI overhaul is big news for small businesses. Nick Race put it to the test.

Eighteen months ago, if someone had told me I wouldn't find a single ATA hard disk drive in the APC Labs today, I would have scoffed (but there aren't any — I checked!). Would this initially buggy, super expensive and unimpressive SATA upstart replace these "fast" and "reliable" PATA drives in literally every PC in the place? I didn't think so, at least not that fast. It's amazing, considering SATA didn't really fix any major problems — it was just new packaging with a promise of more to come. Well, production rose, initial SATA chipset issues were ironed out and *voila*, that's all she wrote.

Now the venerable SCSI standard is getting an overhaul. SCSI was eyeballed as the Ultra320 specification was being finalised — the speed increases via the parallel interface were no longer viable and a solution was sought, in the words of the SCSI Trade Association, "to address anticipated I/O and direct attach storage requirements in the future". Serial Attached SCSI (SAS) was created between a group of around 30 companies under ANSI's supervision.

At a very basic level, SAS changes the interface of SCSI drives from parallel to serial, cutting down from 80 wires with multiple drives connected in a chain to a point-to-point (one cable per drive) connection using just four wires for data. The four wire, point-to-point design was leveraged from SATA, allowing cross compatibility and reducing further design costs. Whereas SATA tops out at 3Gbits/s single-direction transfers, SAS supports 3Gbits/s per direction, aggregated to 6Gbits/s bi-directional.

Designed into the specification is an external connector, allowing up to 1.2GB/s of transfer to external storage devices.

SAS also addresses other issues apart from speed increases where parallel SCSI was starting to fall down. Though SAS is connected point-to-point between the drive and the adaptor, devices known as "expanders" can be inserted into the topology to allow more drives to be connected per adaptor port. In comparison to SCSI, which allows 16 devices per domain through the use of expanders, SAS allows 16,256 drives to be attached to a single domain.

COMPATIBILITY

The introduction of a new standard of connectivity is plagued with backward (and sideways) compatibility with established products. SAS eases this integration by adhering as closely to established specifications as possible. Fibre Channel is completely software-compatible with SAS (as are parallel SCSI frames), while SAS is also hardware-compatible with SATA, allowing SATA drives to be used in a SAS-compatible system at full speed. The SATA integration will allow cost savings for near-line storage. Conversely, SAS drives are not compatible in SATA systems.

ON THE BENCH

APC received a kit including a 4800SAS adaptor from Adaptec and a number

of Maxtor Atlas 15K II 3.5 Series SAS drives. To further our testing, we separately sourced two Seagate Cheetah 15K.4 (ST3146854SS) SAS drives. Unfortunately Western Digital had no drives available for testing.

We configured the 4800SAS connected via PCI-X133 in a dual Xeon with 1GB of RAM. Windows 2003 Small Business Server was installed on a 9GB Seagate ST39204LC Ultra 160 drive, to keep OS overhead off the SAS system. First we tested three Maxtor drives in RAID 5 with a hot spare — a realistic configuration for a small business server. The array managed 76.8MB/s sustained average read throughput.

To see if we could reach the upper level of the SAS throughput speed, we created a RAID 0 configuration with both Seagate and Maxtor drives for speed testing. The Seagate drives managed a throughput of 264.9MB/s while Maxtor topped out at 240MB/s on the dot. Repeat testing with multiple drives in RAID 0 didn't top the Seagate throughput as the upper limit of SAS's 300MB/s theoretical top speed.

Looking forward, speed will increase above Ultra320 when 6Gbit/s SAS systems arrive (likely 2007). The current version of SAS will appear in retail products immediately. **apc**



1. MAXTOR ATLAS 15K II 3.5 SERIES SAS DRIVE 73GB

.. CONTACT eSys Integrated
.. PHONE (02) 9648 5220
.. ONLINE www.maxtor.com
.. MARKET SMB
.. PRICE \$655

2. SEAGATE CHEETAH 15K.4 (ST3146854SS) SAS DRIVE 146GB

.. CONTACT Seagate
.. PHONE (02) 9891 0087
.. ONLINE www.seagate.com.au
.. MARKET SMB
.. PRICE \$1,700

3. ADAPTEC 4800SAS PCI-X ADAPTOR

.. CONTACT Ingram Micro
.. PHONE 1300 651 124
.. ONLINE www.adaptec.com
.. MARKET SMB
.. PRICE \$1,499

✓ Better management; backward compatibility.

.. VERDICT ★★★★★

✗ No faster than Ultra320, yet.



Pioneer vs Claritas Viiv PCs

Nick Race whips out the remote — and so begins the battle of the huge set-top boxes.

Intel's public launch of the new Viiv standard for entertainment PCs earlier this year has seen a huge number of vendors quickly prepare and launch Viiv-compliant systems. Considering the extremely low barrier of entry (using Viiv-compliant products and Windows Media Centre 2005), it isn't surprising that vendors have jumped right on Intel's latest marketing bandwagon. But what does it mean for PC users? For those on the prowl for a PC-based media centre, then it's great news.

Solid standards, guaranteed interoperability with a wide range of PC and home entertainment products, plus a DRM passcard to upcoming media and game downloading services should see those needs well met. If you're not shopping for a media centre, then Viiv

has near nothing to offer.

The APC Labs took delivery of two promising Viiv media centres from Pioneer Computers and Claritas. Both are of the first generation of branded Viiv PCs in home theatre PC cases designed to fit into the lounge room. Both PCs were connected to a 68cm Sony Trinitron flat screen television via S-Video and tested using Microsoft's Remote Keyboard for Windows Media Centre Edition 1.0.

The Viiv spec can be broken down into a hardware and software component. The hardware side demands that a Viiv-compliant PC contain an Intel Pentium D or Core Duo processor on an Intel 945G, 955X or 975X chipset-based motherboard with a Viiv DRM chip and an Intel Pro/1000 VE, VM or PE Gigabit Ethernet connection. In reality,

it means a current-generation Intel CPU on an Intel-licensed motherboard (or Core Duo notebook PC). The hardware is picked to achieve certain tasks, such as simultaneous playback and recording of TV content, playback of HD content and streaming to third party devices.

The software side includes DRM in a chip on the motherboard, an "instant on" quick boot function and the Intel Viiv software, designed to be used with Windows Media Centre Edition 2005 (also a core component in a Viiv system). The Viiv software allows encoded, secure connections between Viiv-enabled media systems, including media servers, Viiv-branded media extenders (such as third party set-top boxes) and other miscellaneous devices, such as Microsoft's Xbox 360.

These secure connections allow media to be shared between devices while keeping the media's digital rights licenses intact.

So how did our test systems compare? The Pioneer DreamVision Viiv MCE Set Top PC is an Intel Pentium D 830 dual-core processor running at 3GHz on an Intel-branded 945GPM motherboard with 1GB of DDR memory. A single 300GB Seagate 7200.9 SATA hard disk drive is included for storage, but there are no extra mounting points in the slimline case for extra hard disk drives. A Pioneer DVR-110D 16x DVD±RW with re-writing at 8x and double-layer burning at 8x is included for backing up and playback of DVDs and CDs. A Compro VideoMate DVB-300 TV tuner supports both analogue and digital TV signals, but can only use one

CONTACT	Claritas
PHONE	(02) 8215 0526
ONLINE	www.claritas.com.au
MARKET	Everyone
PRICE	\$5,599

✓ High-powered; stacks of storage.

VERDICT ★★★★★

✗ Very large case.

Highly Recommended

Claritas' CTV1200LCD Viiv MCE PC system — a powerhouse.





Pioneer's DreamVision Viiv MCE Set Top PC — a solid entry into the media PC world.

• CONTACT Pioneer Computers
 • PHONE 1300 883 218
 • ONLINE www.pioneercomputers.com.au
 • MARKET Everyone
 • PRICE \$2,599



Slimline case; very quiet.

• VERDICT

★★★★☆



No room for expansion.

stream at a time. This means that, with the Pioneer system, you can either watch TV and record the current channel, but cannot watch one channel and record another at the same time.

The system is well built in a slimline home theatre PC case, with flip-down covers hiding manual media control buttons, a card reader and front mounted USB and FireWire ports. Outputs on the back of the case allow for the usual 3.5mm jack audio inputs and outputs, plus optical and digital SPDIF output and stereo line-in (for connecting the audio component of DVD, CD or video cassette players). Video output on the machine is taken care of by an ATI Radeon X700, which supports component and S-Video with a breakout cable or direct connection to a DVI compatible TV or monitor. This is a solid start for entering the media centre world, but the lack of upgradability (with no extra drive spaces and limited upgrade options due to the use of low-profile PCI cards) will hamper this system in the long run. The Pioneer is also bundled with a Microsoft remote.



SO WHAT DOES VIIV MEAN FOR PC USERS? FOR THOSE ON THE PROWL FOR A PC-BASED MEDIA CENTRE – IT'S GREAT NEWS

Claritas sent across their top-of-the-range CTV1200LCD Viiv MCE PC system — and it's a little powerhouse, based on an Intel Pentium D 930 65nm 3GHz dual-core CPU (built into the same Intel 945GPM motherboard as the Pioneer system). The Claritas is fitted with 2GB of Corsair DDR2, plus three 400GB Western Digital RE2 hard disk drives for a whopping 1.2TB of disk space.

The Claritas is built in a large home theatre PC case featuring a touch-screen LCD panel in the front, which mirrors the output on the display for quick adjustments without the remote. Though the LCD is well implemented and definitely has the "cool" factor, whether or not it will actually be useful in the lounge room is still up in the air. It would have been much nicer, due to its size, if it mirrored basic media controls (like an attached remote) so channels, volume or pause/play could be hit without

fiddling with popup, small sized media centre controls.

The case has three hard drive bays, fully populated in this model, plus room for one optical drive (in this case a Samsung SH-W162 capable of 16x DVD±RW, plus 8x DVD+RW and 5x DVD+R DL recording). The case accepts full-height PCI cards, so changing internal components in the future will be somewhat easier than with the Pioneer model. The Claritas PC is fitted with two Hauppauge WinTV HVR-1100 digital HDTV tuner cards, configured to allow simultaneous TV display and recording on different channels. The output is driven by a Gigabyte-branded Nvidia 6600 graphics card with composite, S-Video and component outputs. The graphics card's DSUB VGA output is channelled back through to the case's internal LCD screen. Audio connectors consist of the standard 7.1 3.5mm jack inputs and outputs, plus an optical SPDIF

output. The front of the case includes line-in, mic and headphone out ports, two USB ports and a FireWire connection. The Claritas is also bundled with a Microsoft Remote Keyboard for Windows Media Centre plus a Microsoft Remote.

Both the Claritas and Pioneer systems included a 12-month subscription to the ICEGuide MCE-compatible online TV guide. The two systems worked extremely well with the Media Centre OS and there was no slowdown or playback issues, even when recording. But where we hit a wall, and this reiterates that Viiv is still a little too new, we had nothing to connect to it. Commercial services are yet to see the light of day in Australia and, beyond the Xbox 360 (which can use the Media Centre as a "media server", just like Windows XP with the correct download from Microsoft), Viiv-branded devices are nowhere to be seen. **BTTC**



Canon MV960

Affordable digital video doesn't always mean nasty picture quality and resolution.

We're often hypnotised by the latest and greatest in video cameras, such as the momentum toward HD. These cameras have an impressive number of zeros attached to the price but, in the end, dollars are dollars. Video has come a long way, so it's worth

looking at how much meat you get for less than \$1,000.

Canon's MV960 comes in at a very affordable \$799 — a price that would make most who feel they are "serious" about their video look the other way. The body is the really weak part of the deal. It definitely feels like you could break it in a heavy wind. But from here on, things look pretty good.

An 800,000 pixel CCD and Canon's DiG!C DV processor deliver acceptable picture quality. Not

luscious in colour or contrast, but not totally bland either. The effective pixel use is 400,000 for 4:3 and 530,000 for

16:9 — yes, it offers true wide-screen! The full CCD is used in still-shot mode at a resolution of 1,024 x 768 (the image is stored to an SD card).

There's an impressive 25x optical zoom plus a nice selectable zoom-speed option. And hurrah for the built-in slider lens covers! The sooner they appear across the fixed lens market the better.

At 2.7in, the wide LCD screen is good and the unit is really focused on using this as your viewfinder. It works well enough, displaying quite well even in open sunlight.

The camera size makes it very difficult to shoot good footage freehand. All cameras of a compact size suffer from shake issues.

Electronic stabilisation smooths this a little, but you would need to shoot off a tripod to get solid results.

There is also no accessory shoe, so you can forget add-on mics or lights.

A big bonus is the inclusion of analogue video in/out, so you can pass through your old VHS videos and send them straight into your edit software.

If you have an eye for precise image quality, you probably want something with 3CCD or HD shooting capabilities. But if you're looking for a starter unit with good features at a great price, this is a perfect solution. (And, you can always give it to the kids when you upgrade down the track.)

Seamus Byrne



CONTACT	Canon Australia
PHONE	1800 012 167
ONLINE	www.canon.com.au
MARKET	Everyone
PRICE	\$799

✓ Good features at a great price.

VERDICT ★★★★★

✗ Feels quite fragile.

Pioneer DreamBook Tough 220

Ever dropped your notebook? This one's designed to take it.

Not everyone has the luxury of working at a desk. While desktop PC users may be more worried about CPU speed and how fast they can open that funny email with the kittens, road warriors are after battery life and something that can take the knocks of being thrown around all-day.

When it comes to gruelling environments, on-site techs and users out bush are after something that they know will work anywhere. Pioneer is better known for its consumer notebooks, but the Tough 220 can take a real beating. Housed in a thick metallic chassis with rubber reinforced corners and a latch lock, just the look of the thing

inspires confidence. The LCD has a raised and damage-absorbing cover to stop you doing your display a mischief, while each of the ports (of which there are plenty) are all recessed and covered by rubber environmental seals. Even the optical drive, battery and Cardbus compartments have been given the tough treatment with hinged safety latches requiring a two-finger pinch to access, keeping the dust and moisture out of your bays. There's even a hard disk heater function to help you boot up in cold conditions — so even if you're not ready to go yet, it is.

While the notebook packs a 1.6GHz Pentium M, 802.11b/g

wireless module, 40GB hard disk drive, integrated graphics, 256MB of memory and a CD-ROM, it does have plenty of legacy ports. If you're looking for something robust to use alongside your GPS or as part of a field-test kit for servicing machines, this will do the trick nicely with parallel and serial ports as standard equipment.

At just over three-and-a-half hours of battery run time, it's not exactly one for long international flights, but it should give you enough juice to get the job done and back to the charger without any dramas.

It may not be a powerhouse in the performance stakes, but the reasonable battery life,

environmental seals and nifty carry handle make this a go-anywhere kind of notebook (and there's reassurance in knowing it can take a spill or two).

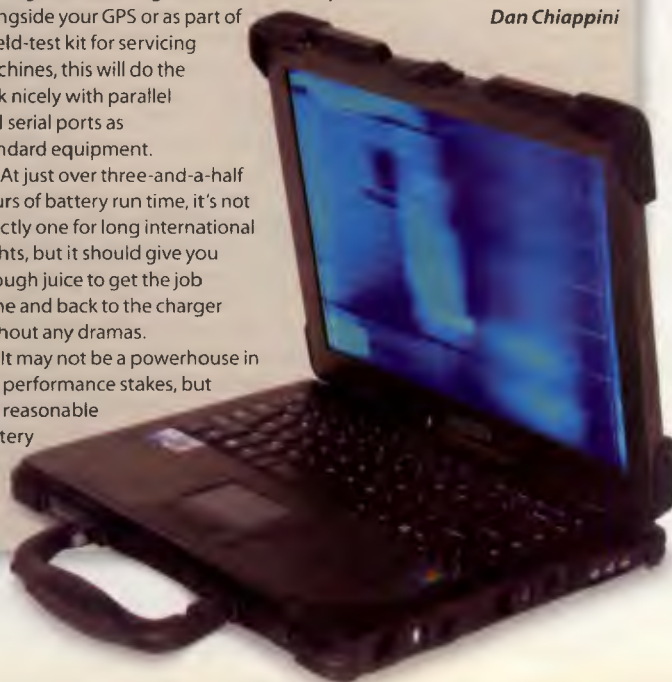
Dan Chiappini

CONTACT	Pioneer Computers
PHONE	1300 88 32 18
ONLINE	www.pioneercomputers.com.au
MARKET	Prosumer
PRICE	\$5,699

✓ Built tough, solid and reliable.

VERDICT ★★★★★

✗ Chunky, low specs.



ASUS®

Rock Solid · Heart Touching

Superior Video with ASUS SPLENDID™ Video Intelligence Technology



MM17T - 17", Multimedia



PM17TU - 17" 3ms Multimedia



PW191 - 19", Widescreen Multimedia



Hotkey (SPLENDID™ 5 Video Preset Modes)



Standard



Scenery



Theater



Game



Night View



3 Skin-Tone

ASUS is known world wide for our uncompromising quality and superior industrial design strength! ASUS today offers a wide range of LCD monitors, presenting superior performance and value for business users and consumers alike.

The exclusive ASUS innovation SPLENDID™, improves image quality on LCD monitors to satisfy the high demands of graphic designers, movie buffs, hardcore sports fans and 3D gamers.

Quality breeds confidence and ASUS offers a comprehensive 1 Year Zero Bright Dot Pixel Policy and 3 Years nation-wide Onsite Pick up and return policy.

Unique Benefits:



Trace Free

Trace Free Technology

Accelerate response time to 3ms for smooth video



Colour Shine
Glare Type Panel

Colour Shine Technology

Anti-Reflection Glare Panel delivers clear & colourful image



Crystal Shine
High Brightness LCD

Crystal Shine

Increasing 40% brightness to 500 nits shows great picture



DVI/D-SUB

DV-D & D-Sub Input

Compatible with most PC signal out put standards in the market



3 Years Australia Wide
Pickup & Return Warranty



Zero Bright Dot

Zero Bright Dot
1-year, zero bright dot
panel warranty



Stereo Speaker

Stereo Speakers

Two 2.5W RMS stereo speakers
built in for top-of-the-line audio



Distributed by

Bluechip Infotech

Phone: 1300 727 474

Fax: 1300 784 848

www.bluechipit.com.au

Cellnet Group

Phone: 1300 365 047

Fax: 1300 880 418

www.cellnetgroup.com.au

For all your ASUS enquires please call : 1800 ASUS 88 or visit : www.asus.com.au



Nvidia GeForce 7600 GT

Introducing graphical excellence to the masses.

While the high end of the graphics market is used for bragging rights on who has the fastest card, the meat of the market lies in the mainstream. A card must eschew the performance-at-any-price philosophy of the high end for a good balance of price and performance. Nvidia has consistently gotten it right in this space, with the GeForce 6600 GT being the standout product for some time now.

So, high hopes are held for the GeForce 7600 GT, Nvidia's new mainstream card. Based upon the GeForce 7 series core, it borrows from the GeForce 7800 series. In terms of market positioning, it is designed to compete with ATI's Radeon X1600 XT (ATI has since launched the Radeon X1800 GTO in response; however, it is priced higher than the 7600 GT). Nvidia has increased the pixel and vertex processing power of the core while also delivering GeForce 7 series features like the latest Purevideo

decoding, Dual-Link DVI output and transparency anti-aliasing to the mainstream. It also continues with support for Nvidia's dual-card SLI technology for those who wish to add two 7600 GT cards for extra performance.

We tested the 256MB GeForce 7600 GT reference card in several games against the Radeon X1600 XT. What we found was that the 7600 GT consistently beat the X1600 XT by a small but definitely noticeable margin. In Half-Life 2: Lost Coast, the 7600 GT was 63 per cent faster than the Radeon, with the gap narrowing to 30

per cent in 3DMark06 and only 8 per cent in 3DMark05. These results indicate the strength of the 7600 GT in applications that are heavy shader users, as both Lost Coast and 3DMark06 employ post-processing graphics effects like HDR.

Nvidia's GeForce 7600 GT is not only the new price/performance leader, it also packs significant tweaks that enable it to shine in the new-gen shader intensive games. While it will never deliver bleeding edge performance, it lets those of us (who don't have \$800+ spare) enjoy the latest in gaming without sacrificing too much in the eye candy stakes.

John Gillooly

CONTACT Nvidia

PHONE N/A

ONLINE www.nvidia.com

MARKET Everyone

PRICE Approx \$375

✓ Latest features; decent performance in modern games.

VERDICT ★★★★★

✗ Mid-range positioning limits heavy use of features like anti-aliasing.



ASUS PW191

Is 4:3 aspect ratio dead? ASUS is on the way to making it so.

While this isn't ASUS' first toe dip into the LCD monitor market, it is the first time they've released a 16:10 wide-screen model. No doubt a reaction to the demand from consumers for wider displays

for DVDs, games and even work, the PW191 is an interesting offering.

The first thing you'll notice about this display is its look; wrapped in a high-gloss black piano finish and stylish silver base, it oozes sex appeal. One of its biggest selling points (and designed to keep in line with the minimalist appearance of the monitor) is its buttonless adjustment for the on-screen display (OSD). The touch-sensitive buttons do away with physical-press buttons and engage when you

make contact with the bezel surrounding the panel. Watch out for grubby finger marks, though. Our PW191 was a pre-production engineering sample and we had some trouble getting the interface to function properly, although this will be corrected by the time the monitors begin shipping. The screen has an anti-glare reflective coating, which in normal desktop use helps greatly, but when watching dark scenes in movies can be a little off-putting as you'll come face-to-face with your reflection if you're sitting too close. The monitor also pivots vertically for word docs and web browsing. There's even a bundled app to rotate the display.

The OSD has five pre-set Splendid modes: Scenery, Standard, Theatre, Game and Night view. On top of this, there are three skin-tone adjustment options (reddish, natural and yellow) to suit your tastes.

We fired up a few of our favourite movies and games, running it through first-person shooters and fast-moving scenes. At 8ms, there's some motion blur as we'd expect, but nothing abnormal and certainly not enough to distract you while playing.

A true desktop monitor, it offers both DVI and VGA ports but lacks any of the AV connectivity which is starting to be found on some other new monitors.

Even still, it's a great monitor for watching a flick or playing some games (or even some spreadsheeting if you're so inclined).

Dan Chiappini

CONTACT ASUS

PHONE N/A

ONLINE www.asus.com

MARKET Everyone

PRICE \$699

✓ Wide-screen; great for movies and games.

VERDICT ★★★★★

✗ Reflective coating can be distracting.



DURABOOK

Get Rough, Get Tough

Twinhead recommends Windows® XP Professional for Business



TOUGH ENOUGH FOR THE REAL WORLD



SPILL PROOF

Spill proof keyboard guards against accidental spills



VIBRATION RESISTANT

Anti-shock mounting protects LCD screen & hardisk



DROP RESISTANT

Specially designed alloy case is 20 times stronger

DURABOOK 15D

- Intel Centrino Mobile Technology
 - Intel Pentium M Processor 740 (1.73GHz, 2MB L2 Cache, 533MHz FSB)
 - Intel Pro/Wireless 2915ABG (802.11 a/b/g)
 - Intel 915GM Chipset
- Genuine Windows® XP Professional Edition or Genuine Windows® XP Home Edition
- Military Standard 810F (Passed Drop/Spill/Vibration Test)
- Reinforced Casing with Magnesium Alloy Body
- Built-in DVD±RW Dual Drive
- 60GB/80GB/100GB/120GB HDD
- Two SODIMM Socket for 512MB/1024MB, Max 2GB
- Dynamic Video Memory from 128MB shared memory (support up to 224MB Memory)
- 15.1" TFT LCD with XGA (1024x 768 Resolution)
- 3x USB 2.0 Port, VGA Port, S Video Port, SPDIF Port & Firewire IEEE 1394
- Internal 56K v.90 Fax/Modem & Integrated 10/100/1000 Fast Ethernet LAN



From
\$1,899

DURABOOK 14K

- Mobile AMD 64 Turion MT-32, 1.8GHz and higher (25W)
- Genuine Windows® XP Professional Edition or Genuine Windows® XP Home Edition
- Military Standard 810F (Passed Drop/Spill/Vibration Test)
- Reinforced Casing with Magnesium Alloy Body
- Built-in DVD±RW Dual Drive
- 60GB/80GB/100GB/120GB HDD
- 512MB/1 GB DDR Memory
- 14.1" TFT LCD with XGA (1024x768 Resolution)
- 2x USB2.0 Port, VGA Port
- Mini PCI 802.11 a/b/g Wireless LAN
- Internal 56K V.90 Fax/Modem & Integrated 10/100 LAN



From
\$1,699

Twinhead Sub - Distributer & Master Reseller

NSW - Oplus Computer 02 9212 6918
QLD - Duratoc Computer 07 3876 0388

VIC - Computers & Parts Land (CPL) 03 8542 8688
WA - Direct Memory Access (DMA) 08 9204 7000

SA - Laser IT 08 8231 2977

HOTLINE: 1300 855 887 www.twinhead.com.au

Exclusively distributed by
Twin Resources Pty Ltd
P.O. Box 7031 Alexandria NSW 2015

Twinhead Service Centres
Sydney: 13/36 O'Riordan Street, Alexandria NSW 2015 Tel 02 9699 2922
Melbourne: Suite 1, 420 Mt. Alexander Road, Ascot Vale 3032 Tel 03 9375 3509

Twinhead International Offices: USA, Spain, Germany, China, Taiwan & Malaysia

Notebook manufacturer established since 1986

TWINHEAD
The Notebook Specialist

Terms & Conditions: Twinhead Inc. All rights reserved. Twinhead and the Twinhead logo are registered trademarks and Elio/Durabook are trademarks of Twinhead Inc. All other logos, trademarks and product names are the property of their respective owners E&EO-DROP TEST-MIL STD 810F, Method 516.4; Procedure IV-VIBRATION TEST - MIL STD 810F, Method 514.4; Procedure I-SPILL PROOF TEST - European Committee for Electro Technical Standardization of IP31.

Gigabyte 8I945GMH-RH Viiv Edition

APC investigates whether a Viiv logo on a motherboard actually means anything.

Even though Intel's Viiv push can be seen as a spiritual successor to Centrino, the mechanics of Viiv certification differ greatly. Centrino was simple, leveraging the tightly integrated nature of notebook hardware, requiring manufacturers to use an Intel CPU, chipset and wireless card. If they used all three then Centrino certification was virtually a given.

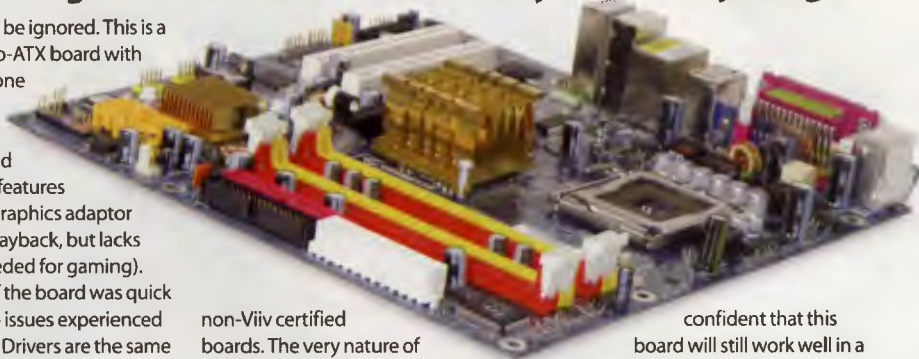
Gigabyte's Viiv Edition 8I945GMH-RH shows how different the picture is with Viiv. Touted as the first board to achieve Viiv certification, it has little difference to other Micro-ATX 945G offerings. To achieve the certification meant Gigabyte needed to use an Intel chipset and Ethernet chip running on Intel drivers. Certification merely encourages its use by OEMs in Viiv-based media centre PCs.

While there is no revolutionary difference between this board and its competitors' offerings, it doesn't mean

the board should be ignored. This is a feature-rich micro-ATX board with four SATA ports, one parallel, four DDR2 DIMM slots, IEEE1394 and HD Audio. It also features Intel's GMA 950 graphics adaptor (fine for media playback, but lacks performance needed for gaming).

Installation of the board was quick and easy, with no issues experienced by us in the Labs. Drivers are the same as any other i945g-based board; we half expected it to come with some Viiv-focused apps, but it didn't.

For the end user, the 8I945GMH-RH has little to differentiate it from



non-Viiv certified boards. The very nature of Viiv being a hardware platform for Windows MCE means that Viiv PCs come from OEMs building MCE boxes (rather than end users cobbling them together). That said, you can be

confident that this board will still work well in a non-MCE-based media PC.

What this product highlights is that the initial confusion over Viiv will continue for some time. Viiv-certified systems are very different to Viiv-certified components. All us end users can hope for is that Viiv certification will guarantee a certain level of robustness in our computer parts. Only time will tell.

John Gillooly

CONTACT	Gigabyte
PHONE	1300 100 100
ONLINE	www.synnex.com.au
MARKET	Everyone
PRICE	\$249

✓	Good feature set and stable drivers.
VERDICT	★★★★☆
✗	For full Viiv-compliance, needs to be used in a media centre PC.

Netgear RangeMax 240 Router

Netgear's latest MIMO hardware finally catches up to Ethernet speeds.

While early model wireless network devices rarely lived up to expectations, the latest generation of MIMO-compatible hardware is rapidly closing the performance gap between wireless and wired networking. This Netgear device is capable of communication at around the same speed of 100-base wired Ethernet, though this is still dependant on range.

In testing with a RangeMax 240 wireless notebook

adapter (WPNT511), the hardware managed a staggering 96.2Mbit/s at a range of 3m, smashing all previous Labs records. It even managed to boost the performance of 802.11g hardware due to its increased sensitivity over 802.11g routers.

Though blisteringly fast over a short distance, it is still subject to the range limitations of older MIMO hardware. We were unable to sustain high-speed transfers over a range greater than 25m; a concern if you're looking to to cover a large area. The router itself sports four 10/100 wired LAN connections and an

additional WAN connection to interface with a broadband modem. It ships with all you need to get up and running: an Ethernet cable, warranty cards and a quick setup guide. Users must rely on an electronic manual supplied on the bundled CD. That said, the quick start guide is well laid out and extremely helpful. Almost all configuration is conducted through a browser interface and there's a stellar configuration wizard, one of the easiest, most comprehensive for any wireless hardware seen in the Labs. The device supports WEP and WPA2 Security, so it's easy to integrate with both modern and older wireless network hardware;

the security system leaves no excuse to set up an unsecured network.

There is full support for VPN connections and DMZ to allow advanced users to work securely from home and segregate network traffic, and both NAT and SPI firewalls are included. The device itself relies on an Airgo Networks Gen 3 MIMO processor to boost network traffic to a claimed peak of 240Mbit/s.

All up, the RangeMax 240 offers outstanding performance for short-range networking, coupled with solid security and an excellent setup wizard. The price may be steep, but it offers lots of bandwidth for wireless gaming and transferring files.

Matthew Overington

CONTACT	Netgear
PHONE	1800 502 061
ONLINE	www.netgear.com.au
MARKET	Everyone
PRICE	Router, \$339; Adaptor, \$219

✓	Blistering performance; excellent setup and security.
VERDICT	★★★★★
✗	Pricey.



Brother MFC-640CW

Brother helps unclutter your desk with its latest all-in-one printer.

There once was a time when kids' school projects, SOHO document printing, scanning and copying all required individual devices. With the advent of multifunction printers (MFPs), things became simpler and we're now at the point where a single device can replace an office full of appliances. Brother's

new MFC-640CW combines all the functionality of a colour fax, colour printer, flatbed scanner, colour copier, fax and answering machine — and will help unclutter your desk once and for all.

One of the new additions to this model is the inclusion of 802.11b/g wireless networking (in addition to the stock-standard 10/100 wired functionality). This allows you to set it up either in infrastructure or ad-hoc mode and share it across a wireless network. Users with multiple PCs can print wirelessly across an office; fantastic for notebook

users who like to wander but still need to print off documents or photos.

Our test target prints came back clean with only minor noise, while flesh tones appeared natural without being over or undersaturated. Home users will love the multifunction memory card readers on the front of the printer, which allow you to print directly from flash media. There's no colour LCD to preview your images (but you can print out an index sheet with thumbnails to decide which ones are worth keeping).

Like the Brother MFC-215c we reviewed late last year (APC December 2005, page 48), the MFC-640CW uses a capillary ink

tube system alongside the four ink cartridges — the result of which is the attractive small form factor chassis (plus less wear and tear on the print head and quiet operation).

At just over six minutes to print our test Word document — with images in mono — it's not the speediest printer around, but the results looked solid and text is easily readable even at small fonts. At eight minutes for the same document in colour, users doing frequent and bulk printing may want to look at a cheap laser, but this is more than adequate for school projects and business printouts — with the added bonus of reclaiming your desk.

Dan Chiappini

• **CONTACT** Brother
• **PHONE** (02) 9887 4344
• **ONLINE** www.brother.com.au
• **MARKET** Everyone
• **PRICE** \$349

✓ A true all-in-one printer; quality photo prints.

• **VERDICT** ★★★★★

✗ Slow to print large documents.

ACDSee Pro Photo Manager

The trusty photo tool turns professional.

ACDSee has been in the image management game since VGA digital cameras were an exciting proposition. It wasn't the most amazing product back in the early days, so some users may be put off because of what they remember.

Fortunately, the software improved with ACDSee 8 — and now with the arrival of ACDSee Pro there is a great deal more power available.

ACDSee Pro offers its trademark support for many formats. A quick look through the list will reveal many formats you've likely never heard of, as well as common standards. For the pros, this means RAW — and ACDSee Pro supports it very well. You can work with Adobe's public RAW format and

DNG, plus RAW formats from all major camera vendors.

Edit controls are robust, stopping short of a Photoshop-level of diversity in options but giving everything most photographers will need — white balance, exposure, brightness, contrast and other usual suspects. ACDSee Pro offers ICC and ICM colour profile support, so you can be certain of what you are doing to the quality of the final image output.

The editing in general is perfectly adequate and combines very well with batch processing options — so you can get big jobs done fast. It's easy watermarking too, which is handy for those keen to display and brand their work online.

ACDSee Pro also delivers what could arguably be the best photo organisation around. You can give your photos ratings, categories, keywords, captions and other notes. EXIF and IPTC data is all on hand and editable too. Pro's failing is some unintuitive controls. If you deselect all tag options, for instance, you are taken to an empty set (where you might have expected to return to a "view all" state). With a little practice though, this is definitely an extremely powerful management system — and a good manual is included in the box.

Sharing the joy of your work is easy as well. Everything from very professional-looking HTML photo albums to CD or DVD slideshow

presentations set to music (or even just good quality contact sheets) can be created, uploaded and printed from within ACDSee Pro.

ACDSee Pro provides a lot of bang at an impressive price (or check out the free trial online). It could quickly become a photographer's number one imaging tool.

Seamus Byrne

• **CONTACT** Lako Pacific
• **PHONE** 1800 657 601
• **ONLINE** www.acdsee.com
• **MARKET** Prosumer
• **PRICE** \$219

✓ Good RAW support and output features; powerful management.

• **VERDICT** ★★★★★

✗ Organisation interface could be better.



Samsung YP-Z5 MP3 Player

It's brash, flash and well worth a listen.

Samsung's not the new kid on the block when it comes to MP3 players. The Yepp series of portable devices has seen a long, glorious history for the Korean company; can they do it again?

The new Z5 MP3 player is slim, loud and surprisingly flash, with more than a definite nod toward industrial-styled design. Weighing in at a svelte 54g and measuring 44 x 89.5 x 11.35mm (about 30 per cent thicker than an iPod nano), it's not going to weigh you down. It features a 1.8in colour LCD used for navigation and photo display. The screen is crisp, bright and perfectly suited to the Z5.

The flash-based storage of the model we received for review held 2GB; a 4GB model is also available for \$379 (and a 1GB baby is \$229). The Z5 supports MP3 and WMA playback and features a display (and a slideshow function) for JPEG images (scaled for the screen).

Apple's iPod range has managed to stay at the top of the MP3 player market due to its constantly refined and idiot-proof usability. In comparison, the Z5 shouldn't have anyone scratching their heads either.

The menu system is straightforward and effective, though the physical interface could use a little improvement. Those of us with thicker fingers will occasionally mis-click when scrolling (but the worst that can happen is pausing the music).

The unit is provided with no software; instead it relies on Microsoft's Windows Media Player 10 to synchronise files and photos to the player.

Though MP10 doesn't have the best track record for music management, its inclusion in any up-to-date Windows XP PC is almost guaranteed.

With earbuds in, the Z5 sounded great. It's got enough grunt to push the volume up to 11 — and the clarity is spot-on. That said, the included buds are pretty average, so consider picking up a pair more to your liking further down the track (no pun intended). Samsung claims a 35-hour battery life on the Z5 (with a four-hour recharge), and though our testing didn't manage to run it dead, the player was still going strong at 20+ hours.

Nick Race



• CONTACT	Samsung
• PHONE	1300 369 600
• ONLINE	www.samsung.com.au
• MARKET	Everyone
• PRICE	2GB, \$319; 4GB, \$379

✓ Excellent screen; great audio and battery.

• VERDICT ★★★★★

✗ Not for the thick-fingered.

Xbox 360 Controller for Windows

Console yourself — ergonomic gaming has arrived for the PC.

Gamepad controllers have always enjoyed prominence in the console arena, but have never been seen as a must-have for PC gamers. In fact, most would argue that it is the keyboard and mouse control combo that distinguishes PC gaming. That

said, the rise in PC ports of console games has meant that gamepads have become more and more useful for playing games designed around a console control system.

Microsoft's big announcement at the 2004 Games Developers Conference was tipped to be the

Xbox successor — but turned out to be a game development environment called XNA. Designed as a cross-platform set of tools, XNA promised to bring links between the Xbox and PC sides of gaming, essentially facilitating an increase in the frequency with which Xbox games could be ported to PC. This involved

everything from PC integration with Xbox Live to the promise of a unified controller working on both console and PC platforms. This has been realised thanks to the use of USB to connect controllers on the Xbox 360, which allows users to plug the corded controller straight into their PC.

In order to get it up and running, all you need to do is download a small software package from the Microsoft web site. Once installed, the controller is recognised and configurable as a direct input device and you can instantly start gaming with it.

It's a great system, as it means PC gamers can directly benefit from the huge amount of effort put into the

Xbox 360 controller design. Not only is it incredibly comfortable to use, but the wired version of the controller is great for those with big hands (who find the protruding battery pack on the wireless controller annoying).

There's actually not much to the Xbox 360 Controller for Windows. What is refreshing is how easy to set up it is; within minutes of plugging it in for the first time you can be gaming away happily. Plus, as far as controllers go, this is one of the more satisfying ones on the market. The added bonus is that if you ever get your hands on an Xbox 360, you'll have a spare wired controller ready to go.

John Gillooly



• CONTACT	Microsoft
• PHONE	13 20 58
• ONLINE	www.microsoft.com/hardware
• MARKET	Everyone
• PRICE	\$59.95

✓ Quick and easy to set up; very comfortable design.

• VERDICT ★★★★★

✗ No wireless version available for PC.

Introducing
A NEW WORLD CLASS PLAYER

All your desktop needs in one compact device



Toshiba scores again

The new e-studio165 and 205 digital Multi-Function Devices (MFD) bring a whole team of functions together to meet your business needs. You can print, scan, copy, fax and email with a minimum of fuss, leaving you free time to enjoy the game!

See Australia v Brazil World Cup™ match this June in Munich LIVE! Two tickets to the game could be yours. Visit www.eid.toshiba.com.au/soccer to complete the entry.

Australiawide: 1300 794 202

NZ: 9 526 7716

TOSHIBA

synchronise your business



Topfield TFP20 Portable Media Player

Move over Archos, there's a new player in town.

Not content to sell some of the best PVRs, Topfield has released a Portable Media Player (PMP), that blows away the competition.

The Topfield TFP20 PMP sports a 10.2cm screen offering an incredible 16 million colours, whereas the competition can only muster 262,000 — often on a smaller display. On this screen, hefty

wide-screen DivX files play back amazingly sharp and smoothly. The TFP20 weighs in at 270g and is only 23mm thick.

Impressively, the TFP20 doesn't come with software. Why? Because it doesn't need it. There's no draconian DRM so it works with any operating system — you just drag and drop photos, music and videos straight to the 20GB hard drive via USB2.0. Nor do you have to convert some video

formats before transferring, unlike the Archos AV500 and iRiver PMP-140. Throw in the TFP20's clean, intuitive interface and its tiny remote and you have the most user-friendly PMP on the market.

When it comes to music,

• **CONTACT** Topfield Australia
• **PHONE** 1300 889 803
• **ONLINE** www.topfield.com.au
• **MARKET** Everyone
• **PRICE** \$799

✓ Excellent screen; no DRM.

• **VERDICT** ★★★★★

✗ Only 20GB; poor carry case.

the TFP20 handles MP3, WMA, WAV, ACC, OGG and AC3 files. As for video, it plays MPG, WMV, ASF and AVI files on its 480 x 272 LCD, using the built-in speaker, or to an external television via composite video. There's no memory card slot but it does act as a USB host (to copy files from digital cameras and memory card readers).

The photo browser will rotate, zoom, pan and run slideshows. It supports JPG, BMP, PNG and GIF, with TIFF expected at time of printing. This will make the TFP20 an excellent choice for prosumer photographers looking for an image tank and viewer.

Also impressive is that it records from the built-in mic as well as external audio and video sources — a feat only Archos can match. It will even record from a Macrovision-

protected DVD and then playback to TV, something Archos players forbid.

Despite this impressive list of features, there are some drawbacks when comparing the TFP20 to Archos' fantastic AV500. For starters, the TFP20 is only 20GB while the AV500 is 30 or 100GB. Only the AV500 has S-Video and SCART connections, but even when using composite video its recordings look sharper than the TFP20. The AV500 comes with a custom-fitted case compared to the TFP20's cloth bag. But if you're just looking for the best video playback possible, the Topfield TFP20 is the new champion.

(If you want the best all-round device, the Archos AV500 still sneaks home on points.)

Adam Turner



Sorenson Squeeze 4

Good video compression, but is it worth the price?

Is having a standalone video compression tool all that important? What can it do that your edit package can't? It may not be clear on the surface, but once you dig a little into Sorenson Squeeze 4.3, you'll soon discover it quickly earns its keep.

Squeeze is an easy-to-use compression tool which has deceived some with its simplicity. It may not be dripping with buttons and menus, but hidden within is one of the best compression engines and management tools in the business.

You can apply filters to your video to make sure it looks good at any given compression level. Filters can be managed for each output format you want to send your video out to, as part of the batch output system.

Encoding video formats is where Sorenson shines. This tool includes its four key codecs to deliver the best video quality in every bit of

information compressed. There are seven video formats available — MPEG-4, Flash Movie, Flash Video, QuickTime, Windows Media, Real Media and MPEG-1/2, and you can also export to MP3 audio. These include HD formatting options where available. Within each format is an exhaustive list of compression settings and you can double-click any of these listed presets to tweak even further. This combination of extensive presets and deep customisation makes Squeeze a perfect platform for someone who is getting serious about their video distribution.

The preview system is also impressive, with a simple slider giving

you a split-screen before-and-after view of the impact the filters will have on your output version, plus short rendered previews are one-click away at all times.

Your destination outputs are also kept clear and simple, with the "batch tree" window giving a threaded view of your queued videos, their settings and all intended output products. Want WMV, MOV, iPod video, RM streaming, and DVD output? No problem.

At the price, this is out of reach of most beginners, but it would be a

• **CONTACT** Smart Digital Australia
• **PHONE** 1300 365 015
• **ONLINE** www.smartdigital.com.au
• **MARKET** Prosumer
• **PRICE** \$599

✓ Great output format options and batch compression management.

• **VERDICT** ★★★★★

✗ Pricey for non-pro users.



good investment for a cashed up intermediate or any professional. Sure, you can do a lot (but not all) of this compression work by using a good edit software suite. But anyone in need of regular output to a variety of formats will get a great benefit from the compression management offered here.

Seamus Byrne

State of the art monitors...

Whichever way you look at it...



State of the art design, state of the art technology... Available in screen sizes from 15" to 40", NEC LCD Monitors boast unrivalled screen performance with leading edge technology that makes your visual experience both comfortable and enjoyable. As well as delivering outstanding image quality with minimised glare, reflection and distortion, NEC LCD monitors offer a wide array of features and options such as XtraView® wide-angle viewing, Rapid Response™ for virtually uninterrupted, undistorted viewing of high-speed, full-motion video, portrait/landscape viewing, high efficient backlight promoting extraordinarily long life, a wide range of inputs available, No Touch Auto Adjust allowing the monitor to automatically sync with your graphics card, adjusting screen settings for optimal viewing. All of this and more, in a lightweight design and ultra thin frame, NEC LCD Monitors define the fine art of technology.



AccuSync
MultiSync



Call 131 632 from anywhere in Australia or log on to www.nec.com.au



PHP Designer 2006 – BETA

In the PHP-editor arena, is Designer 2006 a contender for the heavyweight title?

There is no shortage of PHP editors available today, most of which have a rather similar feature set. Unfortunately, most of these are simply glorified text-editors; very few approach the level of sophistication expected from a true IDE.

PHP Designer exists somewhere in the realm between editor and IDE. It's most suited to the hobbyist and semi-professional developer, as it lacks the more advanced features of professional IDEs. It is free, however.

The program uses the ever popular project paradigm. Importing an existing project is easily managed; simply start a new project, point it to the folder the source code lives in and you have yourself a project.

The interface is friendly and functional, featuring skin support and a fair amount of potential for tweaking in the form of toolbar and panel adjustments. The biggest influence on the design of the interface would appear to be Microsoft Word, which makes sense in the context of the target audience.

So, what's missing? Lack of insight is the first problem. An IDE should learn all of the functions and classes present in your project and auto-complete them while you type. PHP Designer doesn't even auto-complete standard PHP functions, although it does help with

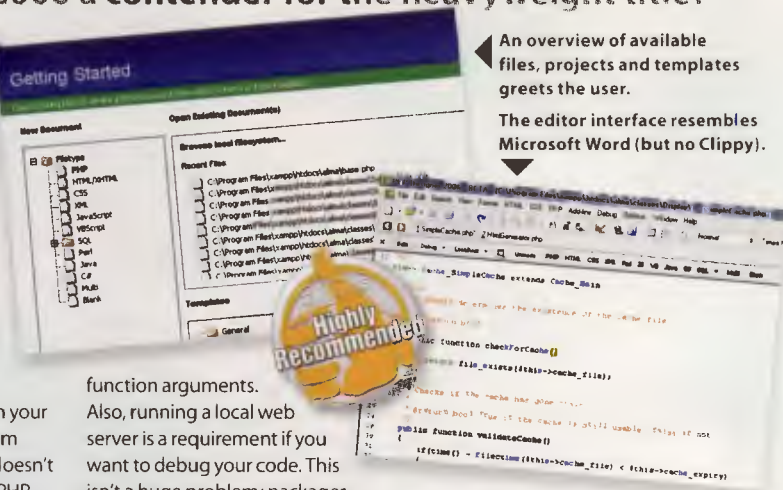
function arguments.

Also, running a local web server is a requirement if you want to debug your code. This isn't a huge problem; packages like XAMPP (www.apachefriends.org/en/xampp.html) make this process a lot easier than it once was.

All in all, PHP Designer is an excellent editor. Professional developers who have worked with a fully featured IDE will find little to

◀ An overview of available files, projects and templates greets the user.

◀ The editor interface resembles Microsoft Word (but no Clippy).



CONTACT	MP Software
PHONE	N/A
ONLINE	www.mpsoftware.dk
MARKET	Everyone
PRICE	Free

Great interface; built-in debugging, free!
VERDICT ★★★★★
Incomplete insight features; Windows only.

recommend it, but, if you're just getting your PHP-feet wet and need an editor with a decent project manager, in-built PHP manual support and a great price, you could do a lot worse.

Declan Kennedy

BlueJ 2.1.2

Finally, a better way to learn Java.

BlueJ is an interactive programming environment designed to teach Java and Object Oriented (OO) programming. Created by our very own Deakin University (and the University of Kent in UK), its main objective is to help the user focus on program design using an OO approach in Java. Too many integrated development environments neglect program design and architecture in favour of extraneous and unnecessary things, thus skewing the way generations of programmers think and work. BlueJ, like some other Java IDEs, goes the other way and allows the user to visualise the structure of the program (UML) enabling the user to have direct interaction with it.

BlueJ is very easy to use. The user starts with a clean workspace (this is where the main action happens). They can then create a new class by clicking a button on the left. A small

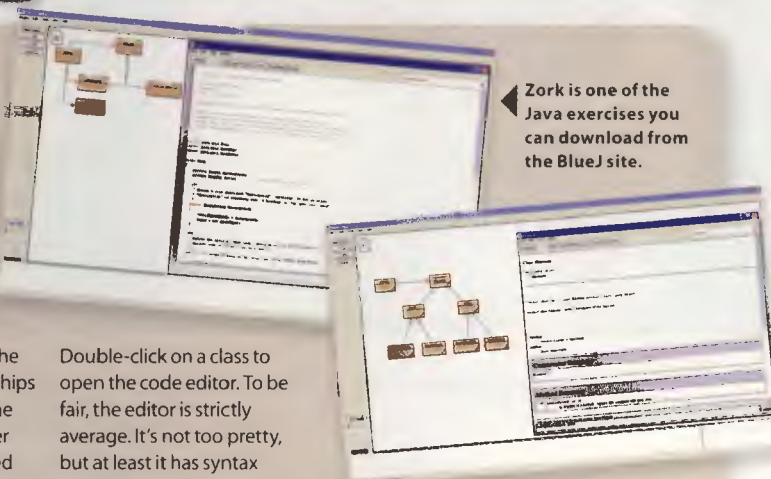
window pops up where the user can select the required type (ie. a normal class, an abstract class, an interface, an applet, a unit test or an enum) and assign it a name. The next two buttons on the left help the user specify relationships between classes. One specifies the "uses" relationship while the other "inheritance". Click on the required button and then drag an arrow from one class to another. Think of a very basic UML editor and you will be right at home. Unfortunately, BlueJ cannot automatically position objects on the workspace (and therefore the workspace can become fairly messy).

Once your class design is complete you can begin to code.

Double-click on a class to open the code editor. To be fair, the editor is strictly average. It's not too pretty, but at least it has syntax highlighting. Key bindings are fairly useful too. Although, we could probably do without the buttons on the top.

Don't forget about testing once you've finished coding. Each class can have a test class associated with it. Now it is time to compile and debug. BlueJ comes with its own

◀ Zork is one of the Java exercises you can download from the BlueJ site.



▲ A sample mockup of a simple application.

visual debugger and testing facilities. BlueJ also supports custom-made extensions. There isn't a lot of them, but it's a start.

BlueJ is a fine teaching tool that will do a world of good (and it is free). We only wish we had it back when we studied Java. BlueJ is available for Windows, Mac OS X and Linux/Unix.

Peter Sbarski

CONTACT	BlueJ
PHONE	N/A
ONLINE	www.bluej.org
MARKET	Everyone
PRICE	Free

Of benefit to students; cost; simplicity.
VERDICT ★★★★★
Bland code editor; application has typical Java GUI look and feel.

NETGEAR[®] BROADBAND SOLUTIONS FOR YOUR HOME

CHEAP PHONE CALLS IN THE HOME



VoIP Service

NETGEAR's VoIP products allow you to use your broadband connection to make phone calls over the internet to traditional phones or mobiles as well as other internet users. NETGEAR offers seamless interoperability to many Australian VoIP service providers giving users an excellent plug-and-play experience. Powerful, secure, private, and easy to use, but best of all, it helps save money on phone calls with VoIP phone services.

You Can

- • **Make free** and cheap calls to any phone (either traditional or internet) around the world
- • Have access to un-timed local calls anywhere in Australia
- • Access your voicemail via your telephone or have them sent to you via email
- • Have your own phone number to call other VoIP users for free

Here's How

- • You can easily DIY with our Smart Wizard set up program
- • You can speak with our technical support team 24/7



Available from all good computer retailers

For more information go to www.netgear.com.au/adverts

Pre-sales technical support **1800 502 061**

NETGEAR[®]
Everybody's connecting.[®]



ADSL2+ MODEMS: the authoritative speed test

Fourteen hardware manufacturers, 23 modems, 1km, 3.5km and 6km lengths of copper phone line, 1 DSLAM, 1 ISP test lab and numerous technical experts.

Dan Warne put them all together to discover this simple fact: some ADSL2+ modems are dramatically faster than others.



THE players

twenty three TESTED



DAN WARNE — NEWS AND ONLINE EDITOR

Dan Warne is APC's News Editor and resident broadband guru. He has been testing and commenting on broadband since 1999, when he was connected to BigPond's broadband network, best described a 'customer experiment' at the time. Since then he has run the gauntlet of RIMs, 3GB caps, politicians on both sides, ADSL2+ modems that weren't, VoIP and wireless broadband. Before joining APC, he was involved in the growth of Whirlpool as News Editor.

VENDOR	MODEL	PRICE	ONLINE	PHONE
1. Belkin	F1P1241EGau	\$299.95	www.belkin.com/anz	1800 235 546
2. Billion	7404VGP	\$299.00	www.billion.com.au	(08) 8322 9544
3. Billion	7300G	\$169.00	www.billion.com.au	(08) 8322 9544
4. Cisco	877W	\$1,622	www.cisco.com.au	(02) 8446 6000
5. D-LINK	DSL-504T	\$129.95	www.dlink.com.au	(02) 8899 1800
6. D-LINK	DVA-G3340S	\$299.00	www.dlink.com.au	(02) 8899 1800
7. DrayTek	Vigor2800VG	\$399.95	www.draytek.com.au	(02) 9643 9989
8. Dynalink	RTA1046VW	\$299.00	www.dynalink.com.au	1800 653 962
9. Dynalink	RTA1335	\$129.00	www.dynalink.com.au	1800 653 962
10. LevelOne	FBR-1416A (v2)	\$119.95	www.levelone.com.au	1800 617 711
11. LevelOne	WBR-3407A (v2)	\$164.95	www.levelone.com.au	1800 617 711
12. Linksys	AG241	\$139.95	www.linksys.com.au	1800 678 808
13. Linksys	WAG54GP2	\$299.95	www.linksys.com.au	1800 678 808
14. NetComm	NB5Plus4	\$129.00	www.netcomm.com.au	(02) 9424 2070
15. NetComm	NB9W	\$299.00	www.netcomm.com.au	(02) 9424 2070
16. NETGEAR	DG834 ADSL Firewall Router	\$129.00	www.netgear.com.au	1800 502 061
17. OPEN Networks	iConnectAccess624	\$129.00	www.opennw.com	(03) 8613 0500
18. OPEN Networks	iConnectAccess624W	\$159.00	www.opennw.com	(03) 8613 0500
19. Siemens	Speedstream 6520	\$249.00	www.bigpond.com	13 12 82
20. Thomson	Speedtouch ST546	\$129.95	www.dvdirect.com.au/thomson	(02) 9975 2799
21. Thomson	Speedtouch ST780WL	\$259.95	www.dvdirect.com.au/thomson	(02) 9975 2799
22. Zyxel	Prestige 2602HWL-61C	\$289.00	www.zyxel.com.au	(02) 8745 8400
23. Zyxel	Prestige 660HW	\$165.00	www.zyxel.com.au	(02) 8745 8400

Twelve months ago, when APC embarked on Australia's first published lab testing of ADSL2+ modems, we weren't prepared for the enormous variation in results that we'd see.

Some modems could sync at ADSL2+ speeds (up to 24Mbit/s), but didn't have an adequately grunty CPU to chew through data faster than about 12Mbit/s. Confusingly, the best-performing

modem, Billion 7402, used the same processor (Conexant) as one of the poorest (Draytek 2800).

This year, we expanded our testing to cover two distinct categories of modem/router:

1. Budget models that only include the essentials: an ADSL2+ modem/router and four ethernet ports.
2. "All-in-ones" including an 802.11g access point, VoIP ports and (in some models) VPN access

to allow a secure, direct connection to your home network from a remote location.

We also added wireless performance testing to our range of tests. With 802.11g's "54Mbit/s" performing more like 20Mbit/s in optimal conditions (and that speed dropping away rapidly as you move away from the base station), we wanted to test our concerns that wireless would lead to a bottleneck

in any ADSL2+ connected home network. Unlike other publications — that have simply plugged modems into a home ADSL2+ connection of unknown line length and condition — we used the test lab of ISP Internode, with assistance from their R&D department and network experts. We had full access to their DSLAM configuration interface to monitor modem performance in detail.

HOW WE TESTED

There are two ways to test ADSL2+ modems: using an electronic phone line simulator which can be configured to inject variable amounts of noise into a line, or using real lengths of real copper wire. Though both methods have their pros and cons, we opted to test with real copper wire (the closest thing to what actually runs between your home and a Telstra exchange).

Of course, because the copper wire we were testing on was new and good quality, our results are probably a little better than what would be seen in the field. Real Telstra phone lines have to contend with moisture in pits, bridge taps (bits of unused copper wire hanging off your line) and a multitude of other problems inherent in a decaying 100-year-old network.

However, our tests were designed to give an accurate comparison of how different modems perform over various line lengths. The longer the line, the greater the background noise, as outside signals are picked up from nearby lines and radio

frequency interference. In fact, because the copper phone line we tested with was batched in enormous coils, the cross-talk from the hundreds of nearby strands would have gone some of the way to simulating what happens in a Telstra main trunk line: signals leak within the fat batch of cables that runs underground from the exchange before being split up to customers' homes.

We tested at three line-lengths: 1km, 3.5km and 6km. We had access to a "Krone block" where it was possible to change the line length in 500m blocks by plugging in at a certain jumper position.

We were also able to monitor modem sync speed and line conditions via the Ericsson PEM configuration software which displayed details on the Ericsson EDN312xe DSLAM (that was pumping signal down the copper line to our modems).

We downloaded large files from a dedicated FTP server running FreeBSD

to determine actual throughput. The server had 2GB RAM and an AMD Athlon 2200XP processor (and was commissioned especially for APC's testing with no other users).

For the wireless testing, we tested all the modems at APC's Sydney CBD offices using the established test locations that we use for other wireless router testing. Our offices are far from a "perfect" test environment (there are many wireless networks in nearby buildings and several in use on our floor). However, rather than providing "perfect lab conditions" for wireless, we wanted to get an idea of what constitutes real-life performance for the modems.

We conducted a site survey using NetStumbler and confirmed that an unused wireless channel was available. We configured all the modems to use that channel before testing.

The speed of an unencrypted wireless signal is really only useful for hotspot operators to know — home

and business users want secure wireless networks. With that in mind, we tested with WPA-PSK turned on — the best level of security commonly available across all the modems. So, in addition to testing wireless signal penetration and throughput, this tested the modem CPU's ability to encrypt data at high speed.

We used the IPerf software running on a server connected by Ethernet to each modem to pump out a stream of TCP data as fast as the modem could take it. Our client machine was a Centrino-compliant Sony Vaio TX17 notebook with all power-saving features switched off.

We tested the wireless performance in three positions: about 30cm from the transmitter, about 10m away (through a wood partition, a plaster wall and a glass wall) and about 15m away (through wood, plaster, metal partitions, racks of magazines, photocopiers and other office equipment).

The actual Ericsson DSLAMs we tested with in Internode's lab.

The back of the DSLAM where copper twisted-pair meets high-speed digital signals.

This Krone block allowed us to change the length of the test copper phone line in 500m increments.

This high speed FreeBSD FTP server was dedicated to APC's testing — to ensure server load wasn't an issue.



Warnie at Internode HQ

ADSL2+ speed surprises

TOP 5 at 1km



- 1 OPEN Networks iConnectAccess624W (15.17Mbit/s)
 - =1 Siemens Speedstream 6520 (15.17Mbit/s)
 - 3 Belkin F1P1241EGau (14.96Mbit/s)
 - 4 Billion 7300G (14.89Mbit/s)
 - 5 Linksys WAG54GP2 (14.63Mbit/s)
- Ranked on actual throughput, not line sync speed.

We knew from last year's testing that line sync speeds bear very little relationship to actual throughput. This was borne out again in this year's testing.

For example, the Draytek Vigor synced at 21.2Mbit/s but only achieved 8.4Mbit/s throughput at 1km — a whopping 60 per cent difference. There were other similarly bad examples, like the Thomson Speedtouch 546 at 55 per cent difference (23.1Mbit/s sync, 10.3Mbit/s throughput) and Dynalink RTA1335 at 51 per cent difference (24Mbit/s sync, 11.7Mbit/s throughput.) In fact, the average gap between sync speed and throughput was 39 per cent.

The best modems in terms of the narrowest gap were D-Link DSL-504T (30%), D-Link DVA-G3440S (32%), Siemens Speedstream 6520 (33%), Billion 7300G (33%) and Belkin F1P1241EGau (34%). All five of these modems used slightly more conservative sync speeds of 20-22Mbit/s at 1km line length, which suggests that if your modem aims for the highest possible sync speed it could actually result in much lower actual throughput.

With such enormous disparity between sync speed and actual throughput, there's not much point paying heed to the speed at which your modem syncs with the DSLAM.

You might be surprised to see that the fastest actual transfer

speed recorded was 15.2Mbit/s, despite the widely promoted maximum 24Mbit/s speed of ADSL2+. It's possible the modems could go faster if you live next to a Telstra exchange. We didn't do any 100m line-length testing as the results would be irrelevant to most readers. We did, however, notice that tweaking DSLAM settings outside of defaults could dramatically increase modem throughput (see page 58). For our main tests though, we showed the results based on the default Internode DSLAM profile assigned to all new customers, to give an idea of an "out of the box" experience.

Given the extraordinary difference in performance at each line length, you might be wondering what modem to buy since you (probably) don't know what your home phone's line length is. There's no easy way to find out, but here's a hint: before an ISP connects an ADSL2+ service they must conduct a Telstra service qualification (SQ) on your line. This tells them whether they are allowed to hook you up for ADSL2+, but along the way, it tells them detailed information about your line length, the thickness/quality of the copper cable running to your house, and so on. They may be hesitant to give the information out but if you can find a friendly sales consultant they may be prepared to help you.

TOP 5 at 6km



- 1 Netgear DG834 (1.90Mbit/s)
 - =1 LevelOne WBR-3407A (1.90Mbit/s)
 - =1 Cisco 877W (1.90Mbit/s)
 - 4 Belkin F1P1241EGau (1.82Mbit/s)
 - 5 Netcomm NB5Plus4 (1.82Mbit/s)
- Ranked on actual throughput, not line sync speed.

TOP 5 at 3.5km



- 1 Billion BIPAC-7300G (8.78Mbit/s)
 - 2 Cisco 877W (8.53Mbit/s)
 - 3 Billion BIPAC-7404VGP (8.10Mbit/s)
 - 4 Dynalink RTA1335 (7.07Mbit/s)
 - 5 Dynalink RTA1046VW (7.07Mbit/s)
- Ranked on actual throughput, not line sync speed.

TOP 5 at 1 & 3.5km



- 1 Billion 7300G (11.84Mbit/s)
 - 2 Billion 7404VGP (11.36Mbit/s)
 - 3 Siemens Speedstream 6520 (10.97Mbit/s)
 - 4 OPEN Networks iConnectAccess 624W (10.84Mbit/s)
 - 5 Belkin F1P1241EGau (10.73Mbit/s)
- Ranked on actual throughput, not line sync speed.

Save 55%* or more on your Phone bill!

Call anywhere, anytime, untimed Australia wide. There's no lock in contracts.

No hassles. No rip off phone bills. Just 10 cents.*

engin.com.au or call 1300 305 000



The Broadband Phone Company



*55% based on recent engin customer survey, 1318 respondents. Individual savings may vary. engin Voice Box or Softphone, broadband Internet connection and Ethernet modem/router may be required. Broadband access, other phone service provider fees excluded. Quality of service may vary with choice of broadband/provider. engin Voice Box RRP \$139, minimum monthly plan \$9.95 plus call costs. Calls may attract separate ISP charges. Call charges include GST and are rounded up to the nearest cent before GST. 10 cents applies to local and national calls in Australia. Tied calls are billed for the first minute, thereafter billed per second. engin Voice Box is soft coded to function with engin networks. 3.5 cent countries include UK, Ireland, USA, Canada, China, Hong Kong, Singapore, Taiwan, Germany & New Zealand. Subject to change without notice. Higher rates may apply for calls to mobile phones. Credit card or charge card billing only. Subject to credit approval. For other charges, monthly billing details and our Standard Form of Agreement go to engin.com.au. AUSTPOSTRIP-4



What a difference a year makes

What was obvious in our testing of this year's modems was that some manufacturers that performed very badly last year — notably Zyxel — have been improving their performance. The same Zyxel Prestige P2602HWL that topped-out at an embarrassing 9.4Mbit/s transfer rate last year performed better this year, achieving a more respectable 13.5Mbit/s throughput (against a line sync speed of 20.1Mbit/s).

Likewise, Netcomm has sorted out the shambles that was its NB5 modem (sold as "upgradeable" to ADSL2+... which Netcomm later revealed would require a hardware upgrade with an attached fee.) To its credit, following negative publicity, Netcomm agreed to cover all costs including postage (and upgraded the modems free of charge). The NB5Plus4 variant we tested (an NB5 with four Ethernet ports) wasn't a speed demon, but it had competitive performance: it was tenth fastest at 14.4Mbit/s on the 1km line-length.

Another obvious example of performance improvement was Netgear's DG834 modem/router. Even though we asked all the modem manufacturers to submit their review samples with the latest ADSL2+ firmware installed, Netgear's DG834 came with a very old version (1.05.00). We upgraded to the latest version (3.01.25) and the modem's sync speed immediately gained 6Mbit/s. Many people probably never think to check if there's a newer version of their modem's firmware. However, modem manufacturers frequently release updates, and often the Australian branches of

modem makers offer Australian firmware versions that are tweaked to match the characteristics of the most widely deployed ADSL2+ DSLAMs in Australian ISPs.

MODEMS THAT WE CAN'T RECOMMEND

One modem that turned in a bad performance last year was Draytek's Vigor 2800. When we originally tested it, Draytek said its poor performance was due to beta firmware. This year, we had trouble getting the modem to connect at all to our test DSLAM (which was locked to use ADSL2+ only). It turned out that Draytek had sent us

a modem with firmware that only worked on ADSL1 (despite, confusingly, having settings for ADSL2 and 2+ in the interface).

We asked what firmware to upgrade to and we were given five different firmware versions, though Draytek couldn't tell us which would be most suitable firmware to use with the Ericsson DSLAMs. After trial and error, we eventually found a firmware version that would allow us to connect (2.6.5-D1621), but even though line sync speeds were good (up to 21.2Mbit/s) actual throughput didn't go faster than 11Mbit/s in any of our tests.

We also observed problems with the LevelOne modems. Although they achieved good throughput speeds, they repeatedly dropped the TCP connection mid-transfer. At other times they would successfully get through a file transfer. Normally we would be hesitant to say this was definitely due to a problem with the modems, but in the case of this test, it happened with both models of the LevelOne modem we tested, and not any of the other modems. Because we used a rock-solid dedicated FTP server, clean copper lines and a consistent test method, we feel confident in saying that these modems have a problem.



MOST PEOPLE PROBABLY NEVER THINK TO CHECK IF THERE'S A NEWER VERSION OF THEIR MODEM'S FIRMWARE



Zyxel P2602HWL: improved performance over last year's results.

Save 55%* or more on your Phone bill!



It's easy to connect with engin:

- 1: Connect a standard phone to your engin Voice Box.
- 2: Connect the engin Voice Box to your broadband service.
- 3: Activate your engin account and start making and receiving calls just as you would do normally.

engin connects your standard home or office phone via broadband giving you some of Australia's lowest call rates. From as little as a monthly service fee of \$9.95* which allows you to make calls for just 10 cents*.

engin \$9.95* monthly services fee gives you:

- 10 cent local and national calls Australia wide
- Calls to mobiles just 27¢ per minute
- International calls from 3.5¢ per minute
- No lock in contracts
- Sign up today for a 30 Day trial period

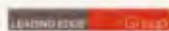


engin.com.au or call 1300 305 000

The Broadband Phone Company



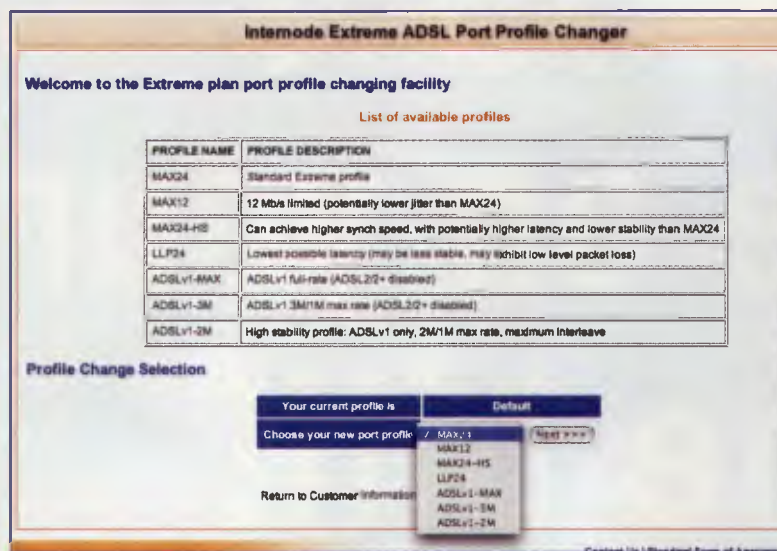
Harvey Norman



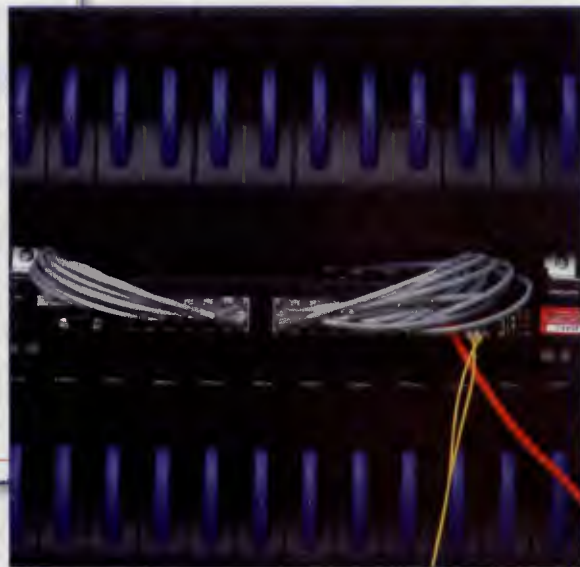
Tandy



*55% based on household engin Voice Box survey, 1318 respondents. Individual savings may vary. engin Voice Box or softphone, broadband Internet connection and Ethernet modem/router may be required. Broadband access, other phone service provider fees excluded. Quality of service may vary with choice of broadband/speed. engin Voice Box RRP \$139, minimum monthly plan \$9.95 plus call costs. Calls may attract separate ISP charges. Call charges include GST and are rounded up to the nearest cent before GST. 10 cents applies to local and national calls in Australia. Timed calls are billed for the first minute, thereafter billed per second. engin Voice Box is soft coded to function with engin networks. 3.5 cent countries include UK, Ireland, USA, Canada, China, Hong Kong, Singapore, Taiwan, Germany & New Zealand subject to change without notice. Higher rates may apply for calls to mobile phones. Credit card or charge card billing only. Subject to credit approval. For other charges, monthly billing details and our Standard Form of Agreement go to engin.com.au. AUSTPC06



Internode and other ISPs let you change the settings of your DSLAM port online via their web site.



A batch of Internode's Ericsson DSLAMs at a Telstra exchange. The spindly yellow cable is the fibre-optic feed.

Give your DSLAM a tweak

Did you know you can probably tweak your ISP's DSLAM to get extra speed from your connection?

Some ADSL2+ ISPs let you choose "line profiles" for your connection. This is something that Telstra-based ISPs can't do; Telstra doesn't allow customers (or even ISPs) to modify any DSLAM settings.

We did all our formal modem testing using the default Internode line profile MAX24 — replicating what the majority of customers use.

But to satisfy our interest, we tweaked a few settings here and there — what we discovered was staggering: huge performance improvements are made by making tiny changes to settings. (NB: Your mileage may vary depending on the quality of your phone line.)

There are two key settings that can be changed on a DSLAM: **Target SNR** — tells the modem to aim for a signal-to-noise margin of a certain amount. Expressed in decibels, it's the difference between the loudness of the modem's signal and the loudness of background noise on the line. For each 3dB, the difference doubles, making the connection more resilient to spikes in line noise,

but also reducing the maximum attainable line speed. Internode offers a line profile for gamers called "MAX24 — HS" which shaves target SNR right down. People with very good phone lines close to the exchange will get a faster connection. But if there is fluctuating line noise, the connection could be unstable.

Interleaving — mixes the packets of data together, along with error-correction data, so if line noise causes packets to corrupt, your modem can recreate them (without the packets having to be retransmitted). Interleaving is described in milliseconds — eg. 4ms of interleaving means 4ms worth of packets mixed together.

We discovered during testing that interleaving can considerably reduce modem performance. For example, the Cisco 877W modem, which clocked in at the leading speed of 19.1Mbit/s actual throughput with interleaving disabled, lost a full 33 per cent of its speed when we switched interleaving on at the DSLAM. (It

dropped back to 19th place at an unimpressive 12.6Mbit/s.) Given Cisco's rep for spec'ing its boxes up with enough grunt to handle features being enabled (without performance degradation), this was quite surprising — perhaps a sign of immaturity in the 877W's firmware.

Other modems that suffered the most with interleaving on were LevelOne WBR-3407A (29% drop in performance), Dynalink RTA1335 (27%), Dynalink RTA1046VW (25%) and Draytek Vigor 2800VG (24%).

On average, having interleaving enabled saw performance drop by 17 per cent. However, Internode managing director Simon Hackett says that interleaving plays a very important role on sub-optimal phone lines. "Any packet loss at all can have a huge effect on performance," he says. "When a phone rings, it's a 50 volt signal heading down the line; at a low frequency that's not supposed to interfere with ADSL, but it does produce a broad spectrum impulse spike. Interleaving does exactly

what CD players do; takes data and spreads it over time so if there's a short spike in line noise (like a scratch on a CD) a number of corrupted packets can be recreated on the fly."

Indeed, one modem in the test, the low-end Zyxel Prestige 660HW, performed considerably better with interleaving switched on, going from a mediocre 10.5Mbit/s to eighth-fastest — 14.5Mbit/s throughput (a 38% boost).

Because interleaving combines a few milliseconds' worth of data together, which must be decoded at the other end, it affects ping time. This can be a downside for gamers who value fast response in their games.

Given that small settings can make such a major difference, getting the most from your ADSL2+ connection is easiest if you sign up with an ISP — such as iiNet and Internode and others — that have selectable profiles (usually on their web site once you have logged in to your account settings.)

Wireless: an ADSL2+ bottleneck

Our testing showed that ADSL2+ modems with interleaving turned on would hit a peak speed of about 15.2Mbit/s. But with interleaving turned off and a finely tuned signal-to-noise ratio, the best modem (Cisco 877W) edged up to a top speed of 19.1Mbit/s real throughput. But can the 802.11g wireless built

in to many of the "all in one" modems actually transmit that fast? The answer, unfortunately, is no. The fastest modem we tested was Dynalink RTA1046VW, achieving an average transfer speed of 15.13Mbit/s. To its credit, sitting 30cm from the router, we were able to get a 21.5Mbit/s transfer rate, but, of course, if you were sitting that close, there would be no problem with using an Ethernet cable.

The real test was our "position 3" which was about 15 metres from the transmitter and which required the signal to get

through wood and metal partitions, office equipment, people and other office miscellanea. In this test, the Draytek Vigor 2800 achieved 9.8Mbit/s, but the close-range champ, the Cisco 877W, achieved a measly 4% of that speed — just 436Kbit/s.

The rather obvious conclusion that can be drawn from these results is that if you are able to get a decent ADSL2+ throughput at home, Ethernet is the way to go. When 802.11n arrives next year, the problem will hopefully be resolved. Until then, it's

probably a compromise between wireless convenience and throughput speed.

One very odd anomaly that we observed with quite a few of the modems was a very poor transfer rate at close (30cm) range. The affected modems were Belkin F1P1241EGau, both Zyxel models and the LevelOne WBR-3407A.

TOP 5 wireless



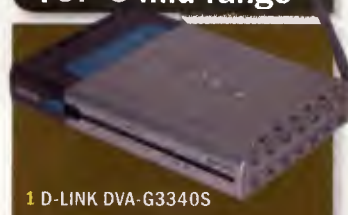
- 1 Dynalink RTA1046VW (15.13Mbit/s)
- 2 Draytek Vigor 2800VG (14.97Mbit/s)
- 3 Billion 7404VGP (13.9Mbit/s)
- 4 Netcomm NB9W (12.81Mbit/s)
- 5 Thomson Speedtouch ST780WL (12.76Mbit/s)

Wireless modems by average transfer rate.

The trouble with testing wireless: big fluctuations can occur during testing. We repeated the tests at each position three times and then averaged results.



TOP 5 mid-range



- 1 D-LINK DVA-G3340S (17.50 Mbit/s)
- 2 Linksys WAG54GP2 (15.95 Mbit/s)
- 3 Dynalink RTA1046VW (15.37 Mbit/s)
- 4 Billion 7404VGP (14.62 Mbit/s)
- 5 DrayTek Vigor2800VG (13.73 Mbit/s)

Top 5 modems at medium 10m range.

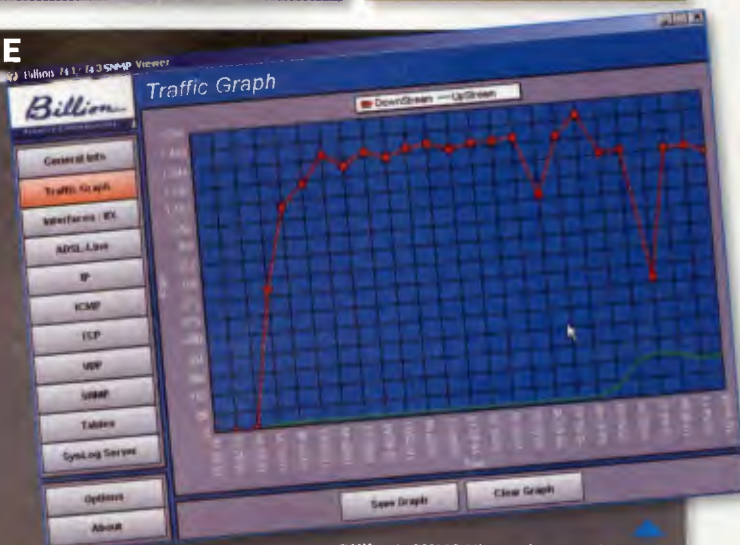
MONITOR YOUR MODEM'S PERFORMANCE

Keeping an eye on your modem's performance isn't always easy: while you can usually get some statistics on sync speed from the modem's web interface, you can't usually get information on throughput. Collecting info on your PC's actual throughput isn't always easy either if you have multiple downloads going at once.

One way of doing it is to use Simple Network Management Protocol (SNMP), which is a way to gather information from your router and display it on your PC. You can monitor all sorts of interesting things like the signal-to-noise ratio, which, if fluctuating, could indicate a problem with your line.

Most home modems/routers do support SNMP (with varying degrees of completeness) and there are lots of how-to guides available online. Some of the more popular programs are SNMP Traffic Grapher, PRTG and MRTG.

However, Australian enthusiasts have made utilities for some specific brands of modem/router that make it a piece of cake to keep an eye on what's happening. Billion routers in particular have a utility available called "Billion SNMP Viewer". There was no homepage for it at the time this article was written, but search Google and you'll turn up links to it at Whirlpool (<http://whirlpool.net.au>) soon enough.



Billion's SNMP Viewer lets you keep an eye on what's happening on your modem.

Save 55%* or more on your Phone bill!

Call anywhere, anytime, untimed Australia wide. There's no lock in contracts.

No hassles. No rip off phone bills. Just 10 cents.*

engin.com.au or call 1300 305 000



The Broadband Phone Company



55% based on recent engin customer survey, 1318 respondents. Individual savings may vary. engin Voice Box or Softphone, broadband internet connection and Ethernet modem/router may be required. Broadband access, other phone service provider fees excluded. Quality of service may vary with choice of broadband/speed. engin Voice Box RRP \$139, minimum monthly plan \$9.95 plus call costs. Calls may attract separate ISP charges. Call charges include GST and are rounded up to the nearest cent before GST. 10 cents applies to local and national calls in Australia. Timed calls are billed for the first minute, thereafter billed per second. engin Voice Box is soft coded to function with engin networks. 3.5 cent countries include UK, Ireland, USA, Canada, China, Hong Kong, Singapore, Taiwan, Germany & New Zealand. Subject to change without notice. Higher rates may apply for calls to mobile phones. Credit card or charge card billing only. Subject to credit approval. For other charges, monthly billing details and our Standard Form of Agreement go to engin.com.au. AUSTPCSTRIP05

Modem interfaces: good and bad

Routers are phenomenally complex combinations of hardware and software, and few people fully understand all the possible settings.

But there are some settings that most people will bump into sooner or later, whether they like it or not. A modem/router with a good web-based admin interface can be the difference between you spending most of Sunday afternoon reading through lengthy Wikipedia articles on the ins-and-outs of port forwarding (or simply making a simple change and getting on with it).

Although most of the modem/routers we looked at still fit into the category of "so complex they make your eyes water", there were some units that impressed us with improvements in ease-of-use. Of course, for complex users, wizards

can get in the way if you do know what you're doing. The Thomson Speedtouch 780WL struck an excellent balance of ease of use and straightforward configuration. It shows a visual map of your home network that changes when you plug in a new computer or connect a phone to one of the modem's VoIP sockets. It senses the computer's network name so that you don't have to guess which computer is which by IP address. Then, if you need to set up a port-forwarding rule, you click on the computer and select from a very long predefined list of applications and let the 780WL sort out which ports to forward. You can still define your own ports manually.

The Billion 7404VGP also has an excellent feature that makes VoIP a bigger cost-saver and more configurable. An on-screen

"dial plan" builder allows you to specify how certain types of numbers should be connected.

For example, if you are calling a 13 number which connects you to the nearest branch of a company, you can specify on the modem you want those numbers to actually be dialled via your Telstra landline so your location is sensed correctly. You'll never be incorrectly connected to the Pizza Hut in Ayers Rock again.

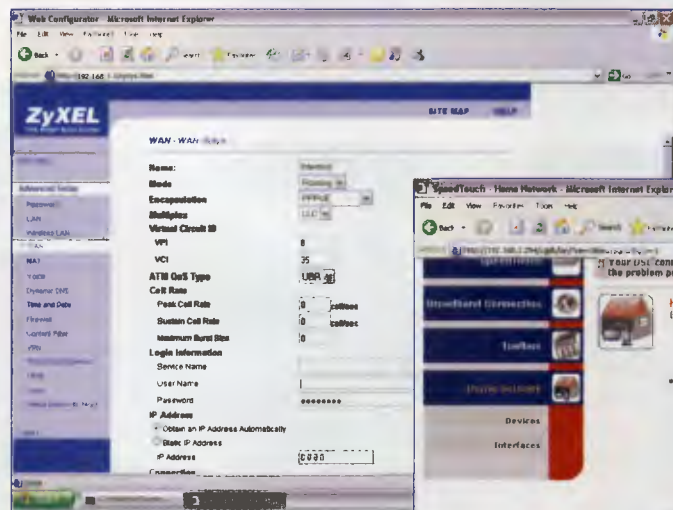
Likewise, some VoIP providers have good rates to certain countries, but not others. Dial plans let you route calls to the USA via one provider and calls to Hong Kong via another, for example.

Some other modems and ATAs have dial plans, but setting them up involves learning a complex language and writing cryptic strings of letters and numbers.

The Billion interface makes this a visual, menu-driven process.

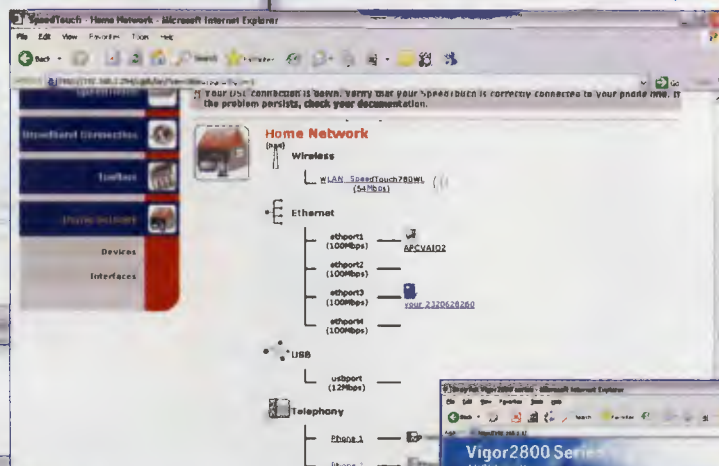
We also saw some pretty bad interfaces. Zyxel seemed to think that every possible configuration option should be visible to the end user, including ATM peak cell rate, sustain cell rate and maximum burst size. Those *incredibly* advanced settings were on the same page as the one where you put in your ISP username and password. That's asking for trouble.

And we were unimpressed with the Draytek Vigor 2800, which unfortunately required a firmware upgrade. You can't do it via the web interface like all the other modems. You have to start the TFTP server in the modem, then use a TFTP client to upload a firmware file. That method was cool in the 1990s, but is a major pain in the arse nowadays.

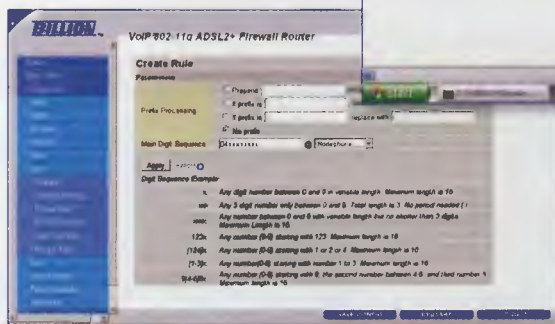


If you have a PhD in network engineering, you'll love Zyxel's configuration interface.

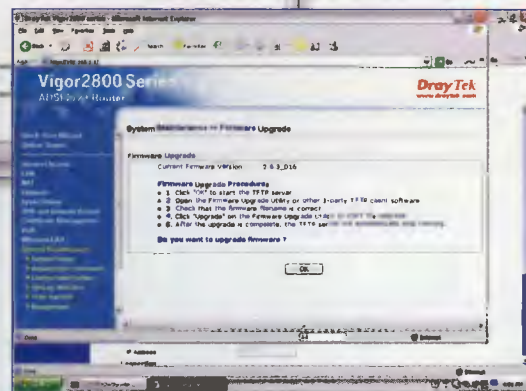
The Speedtouch 780WL makes it easy to see devices connected to your modem and make config changes.



To firmware upgrade the Draytek Vigor, simply start the TFTP server on the modem, download a TFTP client, figure out how to use it, download the firmware file and upload it to the modem via TFTP. Easy!



With a dial-plan interface you can route mobile calls via PSTN to take advantage of capped call rates.



ADSL2/2+

LEADERS IN BROADBAND HARDWARE

SHARE THE NetComm EXPERIENCE

PerformaPlus - high-end performance range*



RRP: \$249.00

NB8W PerformaPlus ADSL2+ Modem Router with wireless

The Rolls-Royce of NetComm Modem Routers - advanced chipset makes it ideal for gamers and other power-hungry users

- ADSL2+ modem
- 4-port Layer 3 QoS Router
- 11g (54Mbps) Wireless Access Point
- SPI firewall
- Console port for advanced diagnostics



RRP: \$279.00

NB9 PerformaPlus ADSL2+ Modem Router with VoIP Gateway (MyNetGateway)

An extremely powerful Integrated Access Device incorporating VoIP and ideal for users who prefer wired connections

- ADSL2+ modem
- 4-port Layer 3 QoS Router
- SPI firewall
- 2x FXS ports for VoIP equipment
- 1x FXO port for PSTN backup



RRP: \$299.00

NB9W PerformaPlus ADSL2+ Modem Router with VoIP Gateway and 11g Wireless (MyNetGateway)

This is NetComm's top of the range hardware device with everything you need in one unit!

- ADSL2+ modem
- 4-port Layer 3 QoS Router
- SPI firewall
- 2x FXS ports for VoIP equipment
- 1x FXO port for PSTN backup

NB5 series - workhorse units at a value price



RRP: \$99.00

NB5 ADSL2+ Single Ethernet/USB Modem Router

A great way to get started with broadband - ideal for a single user or with built-in router can also share to multiple users

- ADSL2+ modem
- Built-in router with IP QoS making it ideal for VoIP
- Single port Ethernet/Single USB port
- SPI firewall



RRP: \$129.00

NB5Plus4 ADSL2+ 4-port Ethernet/USB Modem Router

Ideal for users who need to connect & network multiple wired devices and share an Internet service

- ADSL2+ modem
- Built-in router with IP QoS making it ideal for VoIP
- 4-port Ethernet switch/Single USB port
- SPI firewall



RRP: \$179.00

NB5Plus4W ADSL2+ 4-port Ethernet/USB and 11g wireless Modem Router

This model is ideal to network and share an Internet service for both wired and wireless users

- ADSL2+ modem
- Built-in router with IP QoS making it ideal for VoIP
- 4-port Ethernet switch/Single USB port & 802.11g wireless access point
- SPI firewall



For the full range of ADSL2/2+ from the leaders in broadband hardware contact your local NetComm product stockist

For more information contact NetComm on (02) 9424 2070, email sales@netcomm.com.au or visit www.netcomm.com.au

* Your ISP must provide you with an ADSL2 or 2+ service for this feature to be available. This product will operate as a standard ADSL modem router when an ADSL2/2+ service is not available.

NetComm®
Broadband Solutions



The results

With such variance in performance at different line lengths, it's difficult to say that one or two modems are the best of the bunch. Indeed, if you know your line length, the best thing you could do would be to look at the performance graphs and make your own decision.

However, we did look at what modems stood out as having good performance overall. To determine this, we averaged the modems' performance at 1km and 3.5km to get a sense of their ADSL2+ throughput at the most common line lengths. We didn't include the 6km test results in our averaging because it is at the outer fringe of what is practical for an ADSL connection and the low results across all modems would unnecessarily distort the average.

ALL-IN-ONES

In the all-in-one category, we also considered which modems sustained good wireless performance over all three test positions.

In all-in-ones, the Billion 7404VGP, the successor to last year's winner, the 7402G, came out on top when looking at average ADSL2+ and wireless performance. It was the second-fastest ADSL modem on average (losing out by a thin margin to Billion's budget model, the 7300G), but, impressively, it had the third-fastest wireless performance. Few modems in the roundup excelled in both ADSL2+ and wireless.

We also highly recommend the Netcomm's NB9W in the all-in-one category and the Dynalink RTA1046VW. Both of them had good ADSL2+ speed but excellent wireless speed.

BASIC MODEM ROUTERS

Billion snags Editor's Choice in the budget category as well: the 7300G had the fastest average ADSL2+ performance. (Oddly, at the 6km line length it performed worst, so it's probably not a good choice if you suspect you live far away from your phone exchange.)

We also highly recommend the iConnectAccess624, which had the second-fastest throughput in budget modems, and seventh-fastest across all the modems. **APC**

ADSL2+ SPEED TESTS

All these tests were done using Internode's default customer profile MAX24, which has interleaving enabled for resilience against line noise and a fairly wide signal-to-noise target. Bear in mind some modems performed much worse with interleaving on.

MODEL	1km		3.5km		6km	
	0	16	0	10	0	5
Belkin F1PI241EGau	14.96		6.50		1.82	
Billion BIPAC7300G	14.89		8.78		0.30	
Billion BIPAC7404VGP	14.63		8.10		1.53	
Cisco 877W	12.60		8.53		1.90	
D-LINK DSL-504T	14.56		6.35		1.57	
D-LINK DVA-G3340S	14.25		6.25		1.24	
DrayTek Vigor2800VG	8.45		6.77		1.28	
Dynalink RTA1046VW	13.88		7.07		1.70	
Dynalink RTA1335	11.74		7.07		1.39	
LevelOne FBR-1416A (v2)	13.32		6.37		1.67	
LevelOne WBR-3407A (v2)	10.74		6.63		1.90	
Linksys AG241	14.12		6.37		1.61	
Linksys WAG54GP2	14.63		6.50		1.78	
NetComm NB5Plus4	14.37		6.50		1.82	
NetComm NB9W	14.12		6.92		1.58	
NETGEAR DG834	13.21		6.77		1.90	
OPEN Networks iConnectAccess624	14.50		6.63		0.74	
OPEN Networks iConnectAccess624W	15.17		6.50		0.58	
Siemens Speedstream 6520	15.17		6.77		1.78	
Thomson Speedtouch ST546	10.34		6.77		1.52	
Thomson Speedtouch ST780WL	13.43		6.77		1.49	
Zyxel Prestige 2602HWL-61C	13.54		6.48		1.74	
Zyxel Prestige 660HW	14.50		6.30		1.80	

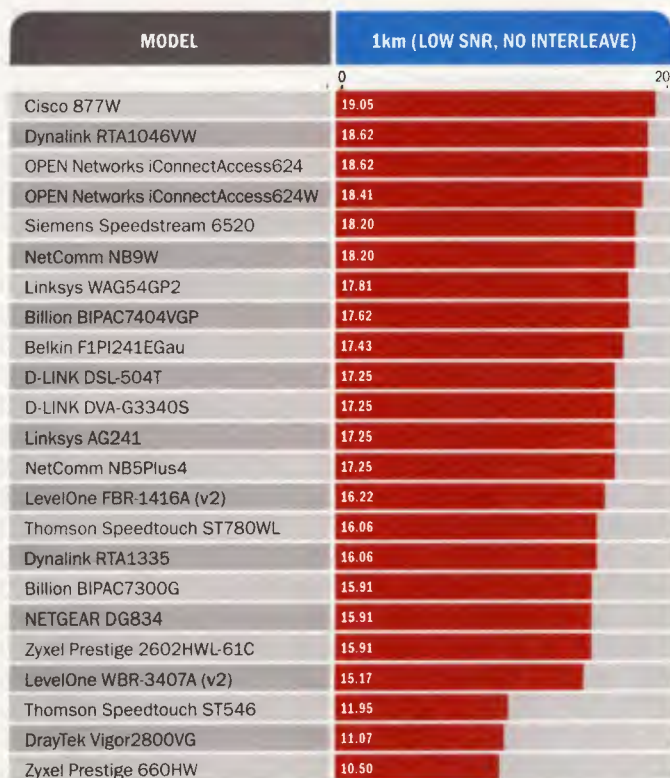
802.11G WIRELESS SPEED TESTS

We connected a server by Ethernet to each modem and used the iperf software to stream data to an Intel Centrino certified laptop in three standard test positions. The fastest speed we recorded from any of the modems was from the Dynalink RTA1046VW at 21.51Mbit/s.

MODEL	CLOSE (30cm)		MEDIUM (10m)		LONG (15m)	
	0	22	0	18	0	10
Belkin F1PI241EGau	0.97		9.48		1.35	
Billion BIPAC7300G	21.33		11.72		3.58	
Billion BIPAC7404VGP	21.46		14.62		5.63	
Cisco 877W	20.34		9.86		0.44	
D-LINK DVA-G3340S	15.39		17.50		3.18	
DrayTek Vigor2800VG	21.36		13.73		9.81	
Dynalink RTA1046VW	21.51		15.37		8.52	
LevelOne WBR-3407A (v2)	0.88		12.92		0.87	
Linksys WAG54GP2	14.29		15.95		0.72	
NetComm NB9W21.37	21.37		12.44		4.63	
OPEN Networks iConnectAccess624W	13.38		13.12		1.98	
Siemens Speedstream 6520	12.58		12.07		0.99	
Thomson Speedtouch ST780WL	20.51		11.68		6.07	
Zyxel Prestige 2602HWL-61C	1.12		11.43		2.81	
Zyxel Prestige 660HW	1.01		13.61		3.58	

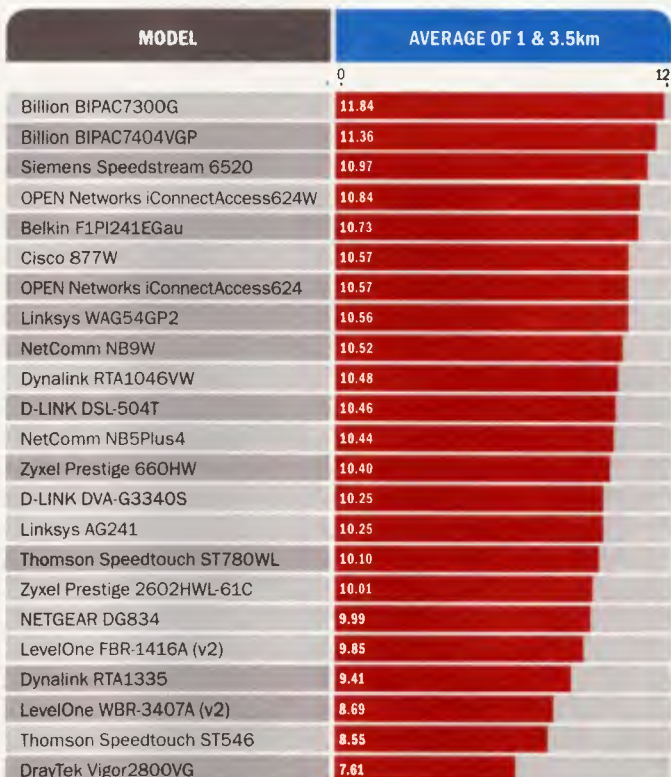
ADSL2+ UNDER OPTIMAL CONDITIONS

If you live 1km from a phone exchange and have a very good quality line, these are the sorts of results you could get. We got these results by shaving signal-to-noise ratio right back and turning off interleaving altogether. Note the Cisco's dramatic improvement in performance, soaring from 12.6Mbit/s (with interleaving on) to 19.05Mbit/s (with it switched off).



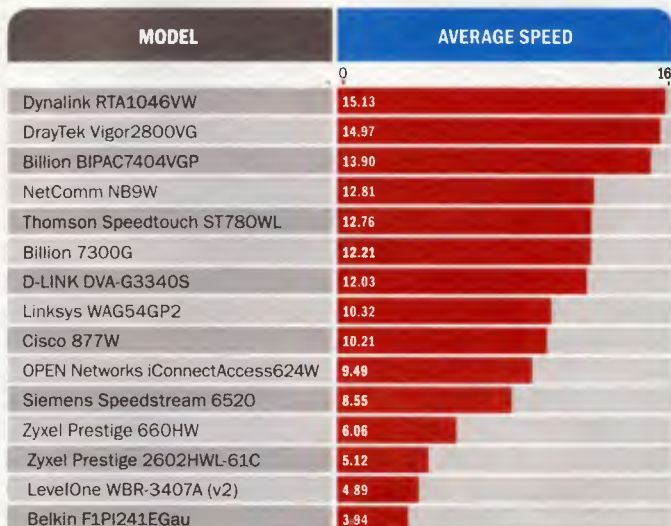
AVERAGE ADSL2+ SPEED

These results are the average of the 1km and 3.5km tests, to give an indication of which modems perform best over common line-lengths. Billion is the clear speed winner here.



AVERAGE WIRELESS SPEED

This graph averages the speeds achieved by each modem across all three test locations. Dynalink's high-end all-in-one unit takes out the speed crown for average throughput across all three distances: a very impressive result. Draytek Vigor2800's result is also stellar — it's just a shame that its ADSL2+ performance was so lousy.





	BILLION BIPAC7300G	D-LINK DSL-504T	DYNALINK RTA1335	LEVEL ONE FBR-1416A (V2)	LEVEL ONE WBR-3407A (V2)	LINKSYS AG241
TYPE	Basic modem/router	Basic modem/router	Basic modem/router	Basic modem/router	Basic modem/router	Basic modem/router
Chipset	TRENDCHIP TC3162	Texas Instruments	Broadcom	Texas Instruments	Texas Instruments	Texas Instruments
LOCAL NETWORKING						
Ethernet ports	4	4	4	4	4	4
Ethernet port speed	100	100	100	100	100	100
802.11g	Yes	No	No	No	Yes	No
WEP	Yes	No	No	No	Yes	No
WPA	Yes	No	No	No	Yes	No
WPA2	No	No	No	No	Yes	No
Bridge mode	Yes	Yes	Yes	No	Yes	Yes
QUALITY OF SERVICE						
QoS by traffic type (port)	Yes	No	Yes	No	No	Yes
Throttling by wired IP	Yes	No	No	No	No	No
Throttling by wireless IP	Yes	No	No	No	No	No
Throttling by E'net jack	No	No	No	No	No	No
QoS by Ethernet jack	No	No	Yes	No	No	No
VOIP FEATURES						
Phone handset ports	No	No	No	No	No	No
Phone line port	No	No	No	No	No	No
PSTN passthrough	No	No	No	No	No	No
Simultaneous VoIP calls	No	No	No	No	No	No
VoIP providers	No	No	No	No	No	No
NETWORK MGT						
UPnP	Yes	Yes	Yes	Yes	Yes	Yes
User def. port fwd slots	20	16	32	12	12	25
SNMP support	Yes	Yes	No	Yes	Yes	Yes
SNMP software bundled	Downloadable	No	No	No	No	No
EXTRAS						
Server for USB printers	No	No	No	No	No	No
NAS server - USB storage	No	No	No	No	No	No
DDNS updating	Yes	Yes	Yes	Yes	Yes	Yes
WARRANTY						
Warranty - months	24	36	12	36	36	36
Online forum	www.billion.com.au	No	No	www.levelone.com.au	www.levelone.com.au	No
PERFORMANCE						
Av. ADSL2+ speed*	11.84	10.46	9.41	9.85	8.69	10.25
ADSL2+ Speed rank*	1	11	20	19	21	15
Av. wireless speed**	12.21	N/A	N/A	N/A	4.89	N/A
Wireless speed rank**	6	N/A	N/A	N/A	14	N/A



Amazing at 3.5km;
wireless performance.



Worst performance
at 6km.

Quite good ADSL2+
performance.

Made an annoying
high-pitched sound.

32 port forwarding
slots.

Average ADSL2+
speed.

Good warranty.

Bad ADSL2+ and
wireless; drop outs.

Good warranty.

Bad ADSL2+ and
wireless; drop outs.

Three-year warranty.

Average ADSL2+;
annoying squeal.

* Based on average of 1km and 3km results ** Average of all wireless distances

NETCOMM NB5PLUS4	NETGEAR DG834 ADSL FR	OPEN NETWORKS ICONNECTACCESS624	THOMSON SPEEDTOUCH ST546	ZYXEL PRESTIGE 660HW	BELKIN F1PI241EGAU	
Basic modem/router	Basic modem/router	Basic modem/router	Basic modem/router	Basic modem/router	All-in-one	TYPE
Texas Instruments	Texas Instruments	Texas Instruments	Broadcom	Texas Instruments	AG241	Chipset
						LOCAL NETWORKING
4	4	4	4	4	4	Ethernet ports
100	100	100	100	100	100	Ethernet port speed
No	Yes	No	No	Yes	Yes	802.11g
No	No	No	No	Yes	Yes	WEP
No	No	No	No	Yes	Yes	WPA
No	No	No	No	No	No	WPA2
Yes	No	Yes	Yes	Yes	Yes	Bridge mode
						QUALITY OF SERVICE
Yes	No	Yes	Yes	Yes	Yes	QoS by traffic type (port)
No	No	Yes	Yes (RT traffic)	Yes	Yes	Throttling by wired IP
No	No	No	Yes (RT/WMM traffic)	Yes	Yes	Throttling by wireless IP
No	No	Yes	Yes	Yes	No	Throttling by E'net jack
Yes	No	No	Yes	Yes	No	QoS by Ethernet jack
						VOIP FEATURES
No	No	No	No	No	2	Phone handset ports
No	No	No	No	No	Yes	Phone line port
No	No	No	No	No	Yes	PSTN passthrough
No	No	No	No	No	3	Simultaneous VoIP calls
No	No	No	No	No	1	VoIP providers
						NETWORK MGT
Yes	Yes	Yes	Yes	Yes	Yes	UPnP
20	Unlimited	Unlimited	32	Yes	20	User def. port fwd slots
Yes	Yes	Yes	Yes	Yes	Yes	SNMP support
No	No	No	No	Yes	No	SNMP software bundled
						EXTRAS
No	No	No	No	No	No	Server for USB printers
No	No	No	No	No	No	NAS server - USB storage
Yes	Yes	Yes	Yes	Yes	Yes	DDNS updating
						WARRANTY
24	24	12	12	24	24	Warranty - months
No	forum1.netgear.com	No	No	www.zyxel.com.au	No	Online forum
						PERFORMANCE
10.44	9.99	10.57	8.55	10.40	10.73	Av. ADSL2+ speed*
12	18	7	22	13	5	ADSL2+ Speed rank*
N/A	N/A	N/A	N/A	6.06	3.94	Av. wireless speed**
N/A	N/A	N/A	N/A	12	15	Wireless speed rank**



Good warranty terms;
OK ADSL2+.

Equal best at 6km
line-length.

Excellent ADSL2+
performance.

Seventh-fastest at
3.5km.

Two-year warranty.

Good ADSL2+ speed.



Faceplate status lights
difficult to see.

Average ADSL2+
speed overall.

Bad performance at
6km.

Suffered with
interleaving on.

Poor ADSL2+; poor
wireless.

Poor wireless speed.



Does **backup & disaster recovery** keep you up at night...
and your users down during the day?



StorageCraft Technology Corporation will help resolve your headaches
and help you sleep easier at night.

- 10-Minutes to rebuild a server
- Reduce or eliminate backup windows
- Restore files in minutes not hours
- Reduce backup complexity
- Increase backup reliability

Desktop
version also
available



For under A\$800/server!

Come to one of our live demonstrations and
see for yourself how simple and reliable
backup & disaster recovery can be!

For details of the next Live Demonstration
visit www.storagecraft.com

With over one million installations world-wide
and proven core technology – StorageCraft
is now in Australia and New Zealand to
deliver fast, reliable and cost-effective
disaster recovery of your critical (and non-
critical) servers. Visit our web site for local
contact details.

 **STORAGECRAFT**

Break free with the Complete Wireless Office

How you can increase the productivity of your business with new wireless technologies

- Wireless Office Solutions
- Elements of a Wireless Office
- A Guide to the Latest Wireless Products
- Wireless Printing Solutions
- Mobile Internet
- Must Have Wireless Accessories
- Ultimate Downtime

Bring your business to a new **sphere** of productivity...

Thomson Telecom can help converge your telecommunications network to a new level of productivity.

For more information on how we can create a complete solution for your business, visit
www.thomsontelecom.com.au



THOMSON

THOMSON TELECOM AUSTRALIA PTY LTD

Contact your representative on 1300 302 699

www.thomsontelecom.com.au

GE AU2833TDE1

- Call Waiting Caller ID
- 70 Name & Number Caller Log
- 10 Memories • Desk or Wall Mountable
- 4 Dedicated Network Service Keys

GE AU2833TDE1

- 2 Line Call Waiting Caller ID
- 13 Number Memory
- 3-way call conference capable
- 75 Name & Number Caller ID
- Line Status Indicator

IP660 TOUCH 5140

- Supports 2 analogue (PSTN) lines
- Expandable up to 5 handsets
- Simultaneously supports 2 external & 1 internal call
- Auxiliary port for answering machine or fax
- 3 Party conference
- Caller ID

THOMSON ST5000

- Ten line Call operation
- 2 Ethernet ports
- Power over Ethernet
- Headset Port
- Advanced Call Features

THOMSON ST2020

- 2 line Call operation
- 2 Ethernet ports
- Power over Ethernet
- Headset Port
- Message Waiting

THOMSON ST595

- ADSL 2+ • WiFi 802.11 b/g
- 4 Port 10/100 Base T Switch
- Home Network Management

THOMSON ST646

- ADSL 2+ • 4 Port 10/100 Base T Switch
- ICSCA Certified Security Service
- Home Network Management

THOMSON ST620

- ADSL 2+ • TICSA Certified Integrated IPsec IP VPN
- Integrated Multi Media SIP PBX • Integrated ISDN back-up
- 4 Port 10/100 Base T Switch • WiFi 802.11 b/g

THOMSON ST760 WL

- ADSL 2+ • 4 Port 10/100 Base T Switch plus USB 1.1
- Wifi 802.11 b/g • Local Network Management
- 2 FXS Voice and 1 FXO ports • TR069 Remote Manageable

THOMSON ST75

- ADSL 2+ • 2 Port 10/100 Base T Switch • USB 1.1 and IP Printer port
- Wifi 802.11 b/g • DECT Wireless Interface • Local Network Management
- Integrated Colour Wideband Audio Handset • 1 FXS Voice and 1 FXO ports

CORDED TELEPHONES

PROFESSIONAL TELEPHONES

VoIP TELEPHONES

SEE US AT **CeBIT**
AUSTRALIA 2006
STAND A22

CeBIT
australia

WINNER
APC LABS BEST BUYS
Best Value
ADSL Modem

ADSL

Wireless office solutions

Freedom to fly

Think back to the first time you saw a mobile phone. Chances are it was in the early 1990s and you considered the machine a rich man's toy to be mocked as an unnecessary indulgence, a trapping of wealth that no-one really needed.

Now fast-forward to 2006, when the convenience of wireless communications means almost every Australian capable of using one has a mobile phone. Many of us have two. And increasing numbers of us are now looking for other technologies that bring the convenience of the mobile phone into other aspects of our lives.

Enter the wireless office and the ability to use the resources of your office wherever you are, using a variety of devices.

The most basic device is the PC, which can connect to your office using WiFi – also known as the 802.11 standard – which replaces wired networks with wire-free connections that provide hassle-free connections to your server, the Internet, and more.

WiFi is also available beyond the office, thanks to hundreds of "hot spots" around Australia, enabling laptops, mobile phones and PDAs fitted with transceivers to connect to the Internet.

Wireless technology means your PC can even connect to the Net away from a hotspot, thanks to companies such as Unwired and Personal Broadband Australia that offer Internet connectivity through the air, freeing you from the need for a phone line to connect to the net and making it possible to do

almost anything, anywhere!

Mobile phones are another key wireless tool, as they now pack sophisticated software into their tiny frames to bring email, news and even entertainment into your hands, all without wires. They can also link to enterprise applications so that staff in the field can turn their mobiles into miniature wireless terminals that extend the orderly processes encapsulated in business applications all the way into the field.

The revolution doesn't stop there. Machines like printers and disk drives now come with wireless connections to from WiFi-powered PCs.

All these elements – and more – make up the wireless office of today. And tomorrow there'll be even fewer wires to contend with as new standards like WiMAX make it

possible for every communications device you own to operate on the same wireless network.

Wireless will even make a splash in your home, both as a way to connect multiple PCs to a broadband connection and also as a way to transport movies, games and music from your lounge room or whichever room you want to relax in.

All of these changes wrought by wireless technology are happening now. And the pace of change is accelerating. Fast. So next time you cast your mind back to the first mobile phone you saw, remind yourself of how quickly your attitude to that technology has changed. And then prepare yourself for even more mind-boggling change as the wireless office takes off in even more interesting and exciting ways!



The wireless router has revolutionised the office.

portable
wireless connectivity

Use it in conference rooms, hotel rooms, or even at hotspots.

AirPlus® G
DWL-G730AP



D-Link
Building Networks for People

Get strong wireless Super G signal from every corner of your home.

New D-Link Smart Antenna Technology creates wider wireless coverage.



- Share your broadband internet, files and printer
- Enhanced wireless coverage with Smart Antenna Technology
- Up to 108Mb wireless data transfer rates*



DI-634M

The New D-Link MIMO Antenna Technology creates wider wireless coverage
With the new D-Link wireless 108G MIMO (Multiple Input Multiple Output) router, you can create a robust wireless network that boasts powerful performance and extended coverage. You can now deploy the next-generation wireless network with dramatic performance improvements.

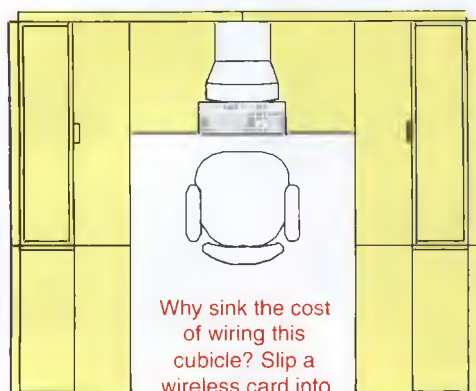
To learn more about D-Link MIMO Antenna Technology visit www.dlink.com.au or call us on 1300 700 100.



D-Link
Building Networks for People

* Maximum wireless signal rate derived from IEEE standard 802.11g when used with other D-Link MIMO product. Actual data throughput will vary. Network conditions and environmental factors lower actual data throughput rate. ©2005 D-Link Pty Ltd. All rights reserved. D-Link™ is a registered trademark of D-Link Corporation. Other trademarks or registered trademarks are the property of their respective owners. DLNK12924

The elements of a wireless office



Why sink the cost of wiring this cubicle? Slip a wireless card into the desktop PCs. Users won't notice any changes, you'll have lower cabling bills.

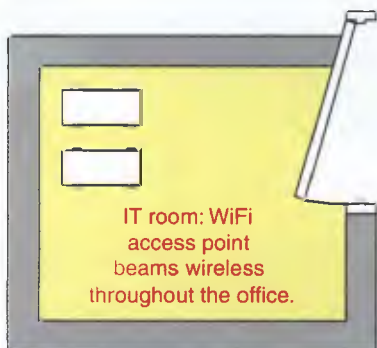
A wireless security camera will help protect your office.



Boardroom: WiFi projector makes presentations easy.

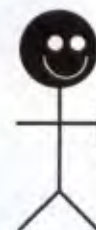


Here at the "hot desk", visitors or staff who occasionally visit people from other offices can connect to your wireless network. Thanks to the booster spreading signal through the far reaches of the office.



IT room: WiFi access point beams wireless throughout the office.

WiFi-packing printer makes it easy for laptop-toters to smear ink on paper when they visit.



Send staff into the field with smartphones. They'll use the mobile phone network on the road, WiFi in your office.

Beyond blue

Ask any business owner who has recently moved into a new office what their least favourite fit out expense was and chance are they'll quickly moan about the thousands of dollars spent installing unglamorous blue category five cabling in their new premises.

It's a more than valid complaint because cabling is a sunk cost whose value plummets perilously close to zero at the very moment it is spooled off the reel. And who ever heard of a company ripping out cabling to re-use in its next office?

Wireless LANs erases this accounting anomaly at a stroke,

by replacing cable with an asset that can literally be picked up and re-used anywhere, anytime. Going wireless in the office means businesses get an infinitely re-usable LAN as good or better than their cabled equivalent, for less money. And finding a business owner willing to complain about that won't be so easy, will it?

Vodafone Mobile Connect make the most of now

Linksys a leader

Linksys is the recognized global leader in VoIP, Wireless and Ethernet Networking for the small, medium business. Linksys specializes in products and solutions that provide effortless and economical sharing of broadband Internet connections, files, printers, videos over a wireless network. These reliable, easy-to-use, world-class products are backed with award-winning technical support, setting the standard for excellence in the consumer and small business.

The Linksys product range includes Network attached storage devices connectable through USB, Linksys Wireless-G Broadband Router is really three devices in one box. First, there's the Wireless Access Point, which lets you connect both screaming fast Wireless-G (802.11g at 54Mbps) and Wireless-B (802.11b at 11Mbps) devices to the network, Wireless print server solutions, USB network adaptor and Wi-Fi finder, Wireless G Networking Solution with SRX speed and range expansion Router function ties it all together and lets your whole network share a high-speed cable or DSL Internet connection, full feature IP PABX system, managed switch solutions for a growing business, and wireless G router using the latest 3G technology.

Linksys create small business networking solutions that increase productivity, improve customer satisfaction and strengthen the competitive advantage all at price points that fit easily into a demanding budget.

GOTalk is growing fast

GOTalk Australia is a rapidly growing communications company whose focus is on providing customer driven; value added services to the residential and business markets. The range of services include complete voice (including local calls, long distance and line rental), Internet (both dialup and broadband), Broadband Voice (VoIP), calling card and mobile services all on a single invoice for convenience.

GOTalk Broadband Voice is the new generation broadband phone service based on making telephone calls over your Internet connection into a phone line also commonly known as VoIP. You can make HUGE savings sending your calls over the Internet, instead of using the regular telephone network. Whether you have DSL, cable or a wireless broadband connection, you can use GOTalk Broadband voice and you'll be able to surf the Net and talk on the phone at the same time. Enjoy the convenience of a single bill when you bundle with GOTalk's other services including phone, mobile and internet services.



vodafone

can you connect on the move?

Access your email, the internet and your company server on the move with Vodafone Mobile Connect. It works everywhere you do. Simply slide the card into your laptop and click to connect.

**make the most of now
with Vodafone Mobile Connect**

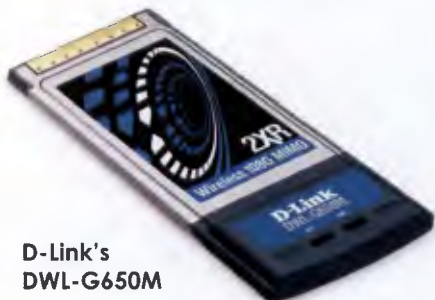


vodafone.com.au

vodafone

A Guide to the latest wireless products

Going wireless is simple now that most key office products - ranging from routers to notebooks - are able to connect wirelessly



D-Link's
DWL-G650M

Prepare to go wireless

So you want to build a wireless office, but don't know where to begin?

Start by choosing a device to broadcast wireless signals through your office.

The most basic of these machines is called a wireless access point and is designed to plug into an existing switch or router and add wireless connectivity to a wired network.

A step up is a wireless access point that also packs a modem and router inside its case. The advantage of this arrangement is that the device can connect to the Net for you, then do all the networking tricks required to let other machines share that connection. One example of a modem/router is D-Link's DSL-504T, an ADSL router modem combining both an ADSL modem and a network router in one unit, bringing high-speed Internet connectivity to a home or office.

Internet connection speeds of up to 150x faster than dial-up, while using a standard phone line. With broadband, experience faster Web surfing or quicker downloads..

It's worth choosing a device that also packs a firewall inside, such as the D-Link DI-634M wireless 108G MIMO router, as wireless networks offer a route for snoopers to investigate your network. The DI-634M doubles the spectral efficiency compared with the current wireless network and provides NAT and Stateful Packet Inspection (SPI) firewall protection, as well as parental controls to monitor and maintain Internet usage. Sometimes snoopers are criminals. A firewall will make it harder for them to penetrate your network, so is a worthy inclusion.

A must-have on any wireless device is the ability to encrypt the data that bounces around the ether. Insist on either Wired Equivalent Privacy (WEP) or WiFi protected Access (WPA). Neither are perfect, but both are a lot better than leaving your network unprotected.

Another standard to watch out for is the version of 802.11 offered by the equipment you purchase. Confusingly, 802.11b is slower than 802.11a. 802.11g is a more recent addition to the family that offers speeds of up to 54Mbps. Chose machines that offer at least the g

and a standards. 802.11b is a nice-to-have, not a must-have.

The next thing you'll need is network cards for your PCs. These come in three flavours. PCI cards plug inside your desktop PC, where they take care of all incoming and outgoing traffic with minimal hassles. PC Cards plug into the thin slot found in almost every laptop computer worth their salt to perform the same trick. PC Cards share the more than useful quality of portability with USB wireless cards, which connect to the USB slots found on laptop or desktop PCs. With the D-Link DWL-G650M



D-Link DSL-504T



gotalk

your communications

**“Join today and receive
6 months FREE!”**

gotalk Business Class VoIP

Bring your telephone number to gotalk and get 6 months access FREE!*

Business Class VoIP Plan

Use your existing Broadband connection to make calls to
ANY Australian landline

2¢ per minute or 9.9¢ per call UNTIMED Anytime

Receive 5 FREE Phone numbers

- NO Contracts
- NO Setup Fees
- Plans from \$9.95 per month
- FREE Voicemail

PLUS

FREE 1300 Number

Receive 5¢ for each call you receive into your Business!

Customers can contact you for the cost of a local call
Australia-wide



gotalk
your communications

Call Now: 1300 133 332
www.gotalk.com

*Terms and Conditions: Offer only available on \$9.95 or \$19.95 plans until 31st May 2006. Credits will be applied to every 2nd gotalk invoice during the first 12 months.



Linksys SPA9000

Wireless 108G MIMO CardBus adapter, your laptop computer can have a robust wireless connection at high speeds and with extended coverage range. D-Link offers a complete solution with wireless 108G MIMO adapters and routers. This allows you to obtain the best results with a true MIMO implementation on both ends of a connection.

It is worth your while to consider a gateway/modem/router VoIP device that includes a couple of connectors for telephones, so you can take advantage of cheap calls that travel over the Internet instead of Telstra's networks. Linksys' SPA9000 is a fine example of this kind of machine, as the \$640 box even includes some PABX functionality so small businesses can do things like put calls on hold.

If your office is large or peculiarly shaped, you may also find you need aerials or boosters to make sure the signals from your gateway reach your computers.

And of course you'll need

computers too. Any desktop machine can be connected to a wireless network with the addition of a card.

Many notebook computers come with wireless networks built in, which makes it far less finicky to get connected.

Whatever you buy, look for Intel's Centrino brand which denotes built in wireless.

LG's M1, T1, P1 and S1 all pack Centrino into their chic chassis, with prices starting at \$2199 for the impressive M1..

Of course not everyone wants or needs the power of a laptop. Personal Digital Assistants (PDA) come to the party with WiFi so that they can get wireless.

The top of the range in this category are smart phones like Palm's Treo or O2's XDA that meld a mobile phone and PDA.

These machines have become the tool of choice for many companies that operate field sales or maintenance forces, as they are light, hassle-free and inexpensive compared to laptops.

Another reason these machines appeal is that it is quite easy to

develop applications that run on their small screens. Companies like Australia's Bright Software offer tools that take enterprise applications off the server and onto a smart phone after surprisingly few days of development work. Services like WebCentral's hosted Exchange e-mail add even more value by making it possible to reach wireless devices like Research In Motion's popular BlackBerry devices.

Other wireless devices you may want to consider include wireless projectors and wireless storage appliances, both of which make it easy for your team to wander in and out of the office and accomplish important tasks without stopping to search for a cable.

Laptops equipped with infrared even allow quick and easy file transfer between machines without the need to find a USB key to transfer data.



LG - P1 Laptop

Go Wireless with Veritel

Call us now on **1300 669 869**

www.veritel.com.au



Veritel Wireless



Go Wireless with Veritel

We are Australia's leading
Wireless Broadband Specialist
Provider servicing business and home
needs for fast, reliable, feature rich wireless broadband.

Residential Services

- Australia's widest wireless broadband coverage area
- Access plans from \$29.95 per month
- FREE static IP address, and multiple email accounts
- Choice of iBurst or Unwired Wireless networks
- NO CONTRACT on all iBurst or Unwired Wireless plans

Business Services

- True Business Grade Wireless Performance and Reliability.
- Up to double the upload speed of other broadband networks
- Wireless VPN solutions for secure access
- Dedicated support for your business 7 days a week



Call us now on **1300 669 869**
to find out how Veritel Wireless
can change your internet life.
www.veritel.com.au



Wireless Printing Solutions

Wireless printers now make it possible for everyone in the office to print via a wireless network - enter a new age of convenience



Samsung's SPP 2040 printer

There's an old saying that the paperless office will arrive at about the same time as the paperless toilet. Which is a risqué way of putting paid to notions that every form of information will soon be electronic and an acknowledgement that printers are likely to be found in every office for a good many years to come.

But today's printers are often difficult creatures because they rely on the assistance of a server to let several users print to them.

Enter wireless printing, in which a wireless access point/router makes a printer available to anyone connected to a wireless network.

For small or home offices, this is a big deal because many connect printers to a single PC. If that machine is switched off or breaks, no-one can print!

But the very nature of a wireless

router means you leave it on all the time, just in case you need to make a wireless connection to your network.

So wireless printing removes the reliance on a computer and its associated complexity, and makes it possible to print anywhere, anytime.

So what are your options if you want to print without wires?

Some devices do it straight out of the box. Brother's MFC-640MCW, for example, includes all the electronics needed to connect to a WLAN. APC visited a friend who recently purchased the machine and was astounded at how easy it is to set up. Simply plug it in, feed it a little information about the wireless network it will connect to and then install drivers on any computers that will use it. A few minutes later the PC will have chosen the machine as its default printer.

Then the fun begins. Pick up a laptop connected to the same wireless network, open a document and go into another room. Then click 'Print'. A few seconds later the inkjet machine will get to work producing the document.

Another way to print without wires is made possible by wireless access points that also pack a USB slot. Some boast a USB slot to connect your printer, and also packs a print

server under its slim hood. That combination means any PC on your wired or unwired networks will be able to use the one printer!

The last form of wireless printing is the funkiest, and uses Bluetooth rather than WiFi. Bluetooth is packed into many mobile phones and other portable electronic devices. Bluetooth-enabled printers make it possible to print from a phone held within a couple of metres of the printer. To try these tricks, check out Samsung's \$899 D600 phone and \$299 SPP-2040 Digital Photo Printer. The combined effect is close to magic!



Samsung D600 phone

NEC

Be Empowered by Innovation

Empowered by Innovation **NEC**

IN HERE YOU CAN BE A GOD



(AS LONG AS THE PROJECTOR DOESN'T BREAK DOWN)

While amazing image quality, unrivalled ease of use and cutting edge functions impress audiences, it's not only our superior technology that separates NEC from the pack.

It's the know-how and product reliability that only comes with over 26 years of experience in projector design.

When NEC engineers design a projector, they spend countless hours not just testing, but actually using prototypes to see what our users will see. Is a white image bright enough under fluorescent lighting? Is the projector's fan quiet enough so that everyone can hear a soft-spoken presentation? These are the kinds of questions NEC answers before a customer ever needs to ask.

Backed with expert service and support teams in every state, along with a 2 year warranty... *you can put your faith in NEC.*



Call 131 632 from anywhere in Australia or log on to www.nec.com.au

Mobile Internet - all about connectivity

Access to the Internet is being revolutionised by wireless, enabling connectivity on everything from notebooks to mobile phones

I unwire here, I unwire there ... why I can unwire anywhere!

The internet has changed the way we work profoundly and wireless access to the Net only accelerates that change by making it easier to get online, in more places.

So what are your options if you want to pick up your email or surf without wires?

The most basic of all tools to deliver wireless internet into your office is a wireless modem/router. These devices, which cost as little as \$100, combine the modem you need to connect to an internet service provider and the router needed to set up a wireless network. Most offer configuration tools you access using a web browser and take less than an hour to set up.

But what if your office spans more than one building, or stretches to cover a campus?

One way to increase the reach of WiFi is to use boosters, antennas and amplifiers. These are all designed to cope with the elements, so are more than sensible to use outside.

Another answer could be a wireless mesh network. To understand a mesh, consider the fact that a wireless modem/router only has enough power to transmit its signal over a certain radius. Once you go out of range you can say bye-bye to the Internet.

A mesh fixes this problem by using lots of overlapping wireless access points all over your office or campus. Each access point is happy to connect your laptop or other WiFi-enabled device, then relay the signal back through other members of the mesh until it reaches the modem/router that connects to the Net.

Meshes are attractive because access points are cheap, which means you can deliver Internet access over a lot of ground for not



Unwired

No wires, no waiting, no worries.

much money.

But if you want even wider service, you need other technology such as that provided by local companies Unwired and Personal Broadband Australia (PBA), each of which operates wireless internet networks they sell just like any other ISP.

The best way to understand these companies is as competitors to traditional phone companies and the services they deliver over the copper wires they have buried in the ground. The likes of Unwired and PBA have made investments in wireless networks that live in facilities like mobile phone towers. From these locations the companies beam Internet connectivity out over Sydney, Melbourne and – in iBurst's case – the Gold Coast. To connect, you'll either need a modem for your desktop computer or a PC Card for your laptop to connect.

Another Sydney company, BigAir, offers a similar service designed to connect business to the Net via wireless technology. Where Unwired and PBA bathe whole cities in wireless, BigAir's kit sends a tight beam of internet connectivity straight to your office.

These wireless ISP services are impressive, but for the time being are restricted to densely-populated cities where these companies can generate a return on their investment.

To access the internet without wires in more locations you'll need a service that piggybacks on mobile phone networks, which thanks to phone companies' deeper pockets are more widespread.

The most basic of these wider-scale wireless technologies is called

LINKSYS
A Division of Cisco Systems, Inc.

Wireless Business Solutions
With a range of products suitable for companies of any size

LINKSYS®

A Division of Cisco Systems, Inc.

Setup a Secure Wireless Network in Seconds!

(No experience required)



WRT54G

Wireless-G Broadband Router

Just Push
the Button

Want to setup a wireless network and turn on all the security features? Follow these simple instructions:

- STEP 1:** Push the button on the new Linksys router with SecureEasySetup™.
- STEP 2:** Click the button on your computer screen.
- STEP 3:** There is no step 3. You're already finished. You are now free to surf the Internet from anywhere in the home, check emails, listen to music, or browse digital photos with the latest in wireless security!

Linksys. Nobody makes networking easier!

Please visit www.linksys.com/au or call
1 800 678 808 for more product details.

Participating retailers:



Harvey Norman
www.harveynorman.com.au



Linksys is a registered trademark or trademark of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries. Copyright © 2006 Cisco Systems, Inc. All rights reserved.



Where and how to go wireless

In a café, there's every chance you'll find a WiFi connection you can use to get online! McDonalds are particularly useful, if a tad pricey.

In the bush, connect via Big Pond satellite or satellite phone.

In the office, connect to the Net through services like BigAir or Unwired. Spread the Net through the office using WiFi and mesh networks to connect to your factory down the road.



In the regions, look for local ISPs that use wireless to bring the net home for less than a mainstream phone company, or try BigPond satellite

On the road, use either a mobile-phone based network like 3G or GPRS, or if you get close to town consider Unwired or iBurst's PC card modem option

At home, use Unwired or iBurst to connect to the Net, then share the connection using WiFi.

engin and the benefits of VoIP

engin is an Australian broadband telephone company that has committed itself to providing new VoIP (Voice over Internet Protocol) technology which allows any broadband user to make and receive calls using their existing telephone at a very low price.

The service is simple to use and comes with a wide range of included features allowing the user to actively control their own calls. The engin Voice Box is the new way to make massive savings on your phone bill.

The role of the Voice Box is to convert your analogue phone signal to digital so that it can be sent over your broadband Internet connection, as opposed to the plain old telephone system.

The Voice Box connects to any touch-tone phone, corded, cordless or DECT phone allowing you to make and receive calls as you normally would.



engin Voice Box

GPRS, short for General Packet Radio Service. Connect to GPRS by using a PC Card in your laptop. When you need to access the Internet, the phone company's special software makes the connection so you can enjoy all the net has to offer.

Because GPRS lives on the GSM phone network, coverage is very widespread. Sadly, the speed is slow, which means you may want something faster like "third generation" or "3G" wireless services.

3G services are not quite as fast as wired broadband or the likes of Unwired's fixed wireless services. The service generally tops out at 384 kilobits per second (kbps), slower than most office LANs. But that's still pretty fast compared to GPRS.

If even more speed is important, consider Telstra's BigPond Wireless Broadband, whose laptop or desktop modems are little faster at up to 512 kbps. Optus' wireless broadband offerings also have appeal, as the PC Card the carrier supplies is capable of connecting to WiFi, GPRS and 3G networks in the one device. Wherever you go, the card simply chooses the most appropriate and effective option!

Go a little further into the bush and wireless comes with you, thanks to ISPs like Yless4You. This company, assisted by federal government subsidies, operates a wireless network in the small town of Bungendore, near Canberra. The technology the company uses is cheap enough that similar ISPs are springing up all over Australia, offering home and business internet services in places that ADSL and other wired broadband cannot reach.

If your travels will take you even beyond the reach of even Yless4U and mobile phone networks, worry not: you can still get online via satellite. Telstra's satellite internet offering is also an option, a package intended for use in fixed locations, and at \$105/month far from cheap. For mobile users who need data anywhere and everywhere, Globalstar's Data Everywhere service relies on satellite phones to bring you data at 38.4kbps. That may be slow, but the company says its coverage reaches 100% of "... Australia and its surrounding waters - out to New Zealand, New Caledonia, and up to 500 nautical miles into the Southern & Indian Oceans." That's a whole lot of territory in which to pick up your email or suck down some cricket scores.

With wireless on a never-ending upward trajectory, universal connectivity is no longer a pipe dream.

Launching at CeBIT 2006

For powerful wireless internet connectivity Australia wide

Come and see us on stand i-13 for FREE Internet (time limit applies) and a chance to try out EtherMax

- Brilliant speeds averaging UP TO 1mbps
- Connects up to 200 users
- Compact and fully portable
- Redundancy backup solution
- Works with Windows, Mac OS and Linux



MM-5500PRO

EtherMax

CDMA 1x / EVDO ETHERNET CELLULAR ROUTER

All the right accessories to make you go wireless

Portability, mobility, connectivity – with these latest devices you can be anywhere and everywhere



O2's Xda Atom

Office and 2.0 megapixel camera it contains. There's also WiFi, of course, making it equally at home on mobile phone networks or cruising hotspots for the occasional slurp of coffee and/or the Net.

Keep the bad guys at bay with Linksys' \$260 wireless video camera or D-Link's \$1860 DCS-6620G Internet Camera. The latter features motorized pan, tilt, and optical/digital zoom, all the tricks to spot the bad guys before they can spoil your day. And why chose a wireless camera? Ask anyone in security and they'll tell you that well organised crooks will case a site

Anything can be unwired

The lovely thing about WiFi is that it costs just a few cents to build it into a gadget. So that's just what electronics manufacturers are doing.

Palm's Life Drive is a \$699 personal digital assistant packing an organiser, media player, even a camera into its slim form. There's even a four gigabyte hard drive to store all your stuff! Bluetooth and WiFi mean this slick machine can connect to just about anything, anytime!

Is there any gadget more desirable than O2's Xda Atom. This PDA/mobile weighs a mere 140 grams, which seems scarcely enough to hold the media player, cut-down version of Microsoft



Linksys Wireless PTZ Internet Camera



D-Link's DCS-6620G Internet Camera

and figure out the resident security cameras' blind spots. Wireless cameras can be moved far more easily than their wired brethren, and of course there are no cabling costs!

The advanced MPEG-4 video compression produces a high-quality, high-frame-rate, up to 640x480 video stream. MPEG-4 encoding facilitates good video quality in varying bandwidth environments. WVC200 also supports MJPEG compression for video, providing good video quality at high bandwidth rates. The comprehensive video features

Vodafone Mobile Connect make the most of now

include an IR filter cut which allow you to see the images in low or no light environments when an IR lamp is used. Snapshots (in JPEG format) of the image can be taken and saved. Snapshots can also be scheduled and sent to an FTP server.

Share the love with Linksys' \$400 WRT54G3G -Wireless-G Router for 3G/UMTS. This wireless access point contains a PC Card slot into which Link expects you'll slot a Vodafone 3G wireless card. The result? A router that makes your wireless internet connection available throughout the office via WiFi, a more-than-handy backup internet connection for the careful office.



Linksys WRT54G3G
Wireless Router

1GB internet access for \$99.95 a month

Get 1GB internet access when you connect to the Data 1GB Bundle* for only \$99.95 per month.

Purchase your Vodafone Mobile Connect card for \$0 upfront* (then only \$12.46 for 24 months, no fees and interest free) or just \$299rrp outright.

Head into a Vodafone store or call 1800 635 627 today.

make the most of now with
Vodafone Mobile Connect



vodafone.com.au



*Available on our Australian data network. ^Available to credit approved applicants who connect to Vodafone On Account.



Linksys CIT200

Calling all phones! The Linksys CIT200 - Cordless Internet Telephony Kit, is a cordless phone that plugs into a PC's USB port to add wireless convenience to voice over IP services like Skype. Cheap calls on your feet – what more could you want?

If you like your wireless machines rugged, consider Panasonic's Toughbook. Plenty of laptops boast WiFi connectivity. Only the Toughbook packs WiFi into a case capable of repelling dripping water for up to 15 minutes. The laptops – there's also a Tablet PC in the range – can also survive hours driving on dirt roads and various other torture tests devised by the US military. You pay a premium for this kind of toughness: the mud-splattered beastie picture here clocks in at \$5999. But they look far, far cooler than almost any other notebook and will keep you connected come what may!



NEC's LT265 Wireless Projector

NEC's projectors are more than worthy wireless widgets from its projector range. These machines contain a PC Card slot, so if you clip in a WiFi card you can hook them up to your PC without wires. You get a far cleaner look for the boardroom table when you deliver your next important presentation.

Similarly, NEC's LT265 projector support high-speed wireless LAN and wired LAN to make them the optimum projector for business presentations, conferences, education, and training. The projectors have advanced functions such as the 3D Reform and Automatic Vertical Keystone Correction, the Wall Colour Correction and substantial security functions. Furthermore, brightness and image quality have been improved and the lifetime of the lamp has been extended (4,000 in eco-mode).



**Targus AMW14US
Laser Wireless Mouse**

Another great wireless accessory that's very close to home is the wireless mouse. Targus is a leader in wireless mouse technology. Its Laser Wireless

Desktop Mouse utilises the latest in laser technology providing 20 times more tracking sensitivity than typical optical mice; the result – greater accuracy resulting on shiny surfaces. Never have mouse usage interrupted again with the rechargeable batteries and USB



**Targus AMW15US
Rechargeable Mouse**

charge cable that charges even while in use (no charge cradle required). The wireless receiver and charge cable easily insert into an extension port, eliminating the need to reach around your PC. Another Targus mouse, the Notebook Wireless Rechargeable Laser Mouse utilises the latest in laser technology providing 20 times more tracking sensitivity than typical optical mice; the result – greater accuracy and improved use on shiny surfaces. Never worry about dead batteries again with the rechargeable batteries and USB charge cable that charges even while in use. Workspace will stay uncluttered and free from cables and data transmission is precise thanks to convenient RF wireless technology.

Desktop Replacement Solutions!



Targus

Desktop Replacement Solutions!



Replacing your home or office desktop PC?

Choose from Targus' range of notebook stands, keyboards, mice and hubs to make the most of your workspace while working from home or in the office. Targus stands help to enhance your posture by enabling you to use your notebook screen at the right height for you!



Notebook/LCD Monitor Stand
PA238U RRP: \$44.95

Save space on your desktop with this ergonomically designed LCD station suitable for your notebook or LCD monitor.



Internet & Multimedia Keyboard
AKB04US RRP: \$39.95

All the functionality of a standard keyboard with the addition of built-in internet and Multimedia hot keys.



Laser Wireless Desktop Mouse
AMW14US RRP: \$79.95

Enjoy greater accuracy with 20X more tracking sensitivity than typical optical mice. Wireless technology provides an uncluttered workspace.



USB 2.0 High Speed 7-Port Hub
PAUH212F RRP: \$79.95

Connect multiple USB devices with this compact, lightweight hub - prevent shutdown with overcurrent protection on each port

Targus has a complete range of stands, keyboards, mice & hubs to suit every requirement & budget. For the full range, please visit our website. These products are available at reputable computer outlets throughout Australia.

Prices, features & specifications are subject to change without notice.

Australia: 1800 641 645 • www.targus.com



State of the art wireless entertainment



It's a wonderful world...

Welcome to the world of wireless entertainment – where life just got a whole lot easier thanks to machines like the media centre PCs offered by Claritas. Its offerings can store all manner of content on their hard drives and then beam it over Wi-Fi to another room in the house.

Claritas' media centre range feature Intel® Viiv™ Technology. The new CLT-302 media centre is a sleek and stylish addition. Intel Viiv Technology gives you access to unique online content and futures integration with other Intel Viiv enabled devices. The CLT-302 can become the central component in your digital home. This is a powerful package for someone running a home office, as it is capable of handling everyday computing tasks, yet is packed with all of your home entertainment needs.

One way to receive data is with a device like an Xbox. Another is D-Link's DSM – 320RD Wireless Media Player with DVD and Card Reader, a machine that receives content broadcast from a PC and connects to your TV or stereo to play your media wherever you want to relax.

High-end audio company Bose offers a similar product for its DVD-based Lifestyle home entertainment system. The \$999 AL8 homewide wireless audio link makes it possible to spread music and video throughout a home to any Bose device equipped with the \$399 AL1 receivers. It's a stylish product that appeals to those who find the whole idea of a media centre PC and configuring

their own wireless network more than a little daunting.

For an easy way to play, record, and control your movies and music from one place, look no further than the Claritas CTV1200 Media Centre PC. More like a stylish home theatre component than a PC, the Claritas is specially designed for making movie-watching and music a joy. Not only is it blissfully quiet, it has a huge 120TB of storage for your music and movie library. It also has Intel's new Viiv technology, which is your guarantee it will work with most wireless devices, and easily!

If games are your idea of fun, you may also want to consider a device like D-Link's DGL3420 Wireless Gaming adapter. This machine can even be configured via an Xbox, but its real value add to gamers is its inbuilt traffic prioritisation that makes sure games data is prioritised, shunting aside any other bits and bytes that dare to attempt access to the gamer's internet connection. The result is better network access for games and a few extra microseconds in which to blast one's rivals into microscopic virtual pieces.

Now that's entertainment!

Claritas media centre CTV1200LCD



The Claritas CTV1200 Media Centre PC with Intel Viiv™ Technology. Now one stylish minimalist unit can provide all your media and entertainment needs. With 1.2 terrabyte of storage, it brings together • HDD Recorder • Dual SD/HD Digital TV tuners • Digital Audio jukebox • Digital Photo and home movie library • DVD Player & burner and much more. Starting from \$2,999. For more info and where to buy: www.claritas.com.au or 02 8215 0526


Intel, the Intel logo and Intel Viiv are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. © 2006 Intel Corporation. All rights reserved.


CLARITAS
BY THE POWER OF MEDIA

The latest centre of attention.



CTV1200 Media Centre

The Claritas CTV1200 Media Centre PC with Intel VIIV™ Technology. Enormous downloads, stacks of storage, outstanding digital imagery and amazing reproduction at the touch of a single infra-red control. Record up to 800 hours of Digital TV

- Dual SD/HD Digital TV Tuners • HDD Recorder • Digital Audio jukebox • Digital Photo Library • DVD Player & burner

Intel VIIV Technology™ gives you access to music & movie downloads, games and more from the comfort of your sofa. Quite simply there is no comparison. Starting from \$2,999. For more info and where to buy: www.claritas.com.au or **02 8215 0526**

For the technically inclined up to 1.2 TB storage, 2GB RAM, 7" LCD Touchscreen, 7.1 Dolby Digital surround sound, Intel Pentium D Dual Core Processor



CLARITAS™
TECHNOLOGY

Save 55%* or more on your Phone bill!



engin connects your standard home or office phone via broadband giving you some of Australia's lowest call rates. There's no lock in contracts and no hassles. Using an engin enabled Linksys Wireless Broadband Router gives you a feature rich telephone service, Internet sharing and wireless access all in the one box.

engin \$9.95* monthly services fee gives you:

- 10 cent local and national calls Australia wide
- Calls to mobiles just 27¢ per minute
- International calls from 3.5¢ per minute
- No lock in contracts
- Sign up today for a 30 Day trial period



engin.com.au or call 1300 305 000

The Broadband Phone Company



*55% based on recent engin customer survey 1316 respondents. Individual savings may vary. engin enabled Linksys Wireless Broadband Router (or equivalent) required, broadband Internet connection and Ethernet modem/router may be required. Broadband access, other phone service provider fees excluded. Quality of service may vary with choice of broadband/speed. engin enabled Linksys Wireless Broadband Router RPP \$199, minimum monthly plan \$9.95 plus call costs. Calls may attract separate ISP charges. Call charges include GST and are rounded up to the nearest cent before GST. 10 cents applies to local and national calls in Australia. Timed calls are billed for the first minute, thereafter billed per second. engin Voice Box is soft coded to function with engin networks. 3.5 cent countries include UK, Ireland, USA, Canada, China, Hong Kong, Singapore, Taiwan, Germany & New Zealand subject to change without notice. Higher rates may apply for calls to mobile phones. Credit card or charge card billing only. Subject to credit approval. For other charges, monthly billing details and our Standard Form of Agreement go to engin.com.au. COMPLWFOFFICE25

BILLION BIPAC7404VGP	CISCO 877W	DRAYTEK VIGOR2800VG	DYNALINK RTA 1046VW	LINKSYS WAG54GP2	NETCOMM NB9W	
All-in-one	All-in-one	All-in-one	All-in-one	All-in-one	All-in-one	TYPE
Conexant	Alcatel (STMI)	Globespan Virata	Broadcom	Texas Instruments	Broadcom	Chipset
						LOCAL NETWORKING
4	4	4	4	4	4	Ethernet ports
100	100	100	100	100	100	Ethernet port speed
Yes	Yes	Yes	Yes	Yes	Yes	802.11g
Yes	Yes	Yes	Yes	Yes	Yes	WEP
Yes	Yes	Yes	Yes	Yes	Yes	WPA
Yes	No	Yes	Yes	No	Yes	WPA2
Yes	Yes	Yes	Yes	Yes	Yes	Bridge mode
						QUALITY OF SERVICE
Yes	Yes	Yes	Yes	Yes	Yes	QoS by traffic type (port)
Yes	Yes	Yes	No	No	No	Throttling by wired IP
Yes	Yes	Yes	No	No	No	Throttling by wireless IP
Yes	Yes	Yes	No	No	No	Throttling by E'net jack
Yes	Yes	No	Yes	Yes	Yes	QoS by Ethernet jack
						VOIP FEATURES
2	No	2	2	2	2	Phone handset ports
Yes	No	No	Yes	No	Yes	Phone line port
Yes	No	No	1	Yes	Yes	PSTN passthrough
2	No	2	4	4	2	Simultaneous VoIP calls
2	No	6	1	2	1	VoIP providers
						NETWORK MGT
Yes	Yes	Yes	Yes	Yes	Yes	UPnP
Unlimited	N/A	10	32	25	12	User def. port fwd slots
Yes	Yes	Yes	Yes	Yes	Yes	SNMP support
Downloadable	Yes	No	No	No	No	SNMP software bundled
						EXTRAS
No	No	Yes	No	No	No	Server for USB printers
No	No	No	No	No	No	NAS server - USB storage
Yes	Yes	Yes	Yes	Yes	Yes	DDNS updating
						WARRANTY
24	12	36	12	36	36	Warranty - months
www.billion.com.au	No	www.draytek.com.au	No	No	No	Online forum
						PERFORMANCE
11.36	10.57	7.61	10.48	10.56	10.52	Av. ADSL2+ speed*
2	6	23	10	8	9	ADSL2+ Speed rank*
13.90	10.21	14.97	15.13	10.32	12.81	Av. wireless speed**
3	9	2	1	8	4	Wireless speed rank**
Good performance at all line lengths.	Good ADSL2+ and wireless.	Inbuilt print server, great wireless.	Best wireless; good ADSL2+.	"Top 10" ADSL2+ performance.	"Top 10" ADSL2+ and excellent wireless.	✓
Wireless only third fastest.	Suffered massively with interleaving on.	Worst ADSL2+ performance.	12-month warranty.	No psm passthroughs for VOIP	Only 12 port forward slots	✗

* Based on average of 1km and 3km results ** Average of all wireless distances



	OPEN NETWORKS ICONNECTACCESS624W	SPEEDSTREAM 6520	THOMSON SPEEDTOUCH ST780WL	ZYXEL PRESTIGE 2602HWL-61C	ZYXEL PRESTIGE 660HW
TYPE	All-in-one	All-in-one	All-in-one	All-in-one	All-in-one
Chipset	Texas Instruments	Texas Instruments	Broadcom	Texas Instruments	Texas Instruments
LOCAL NETWORKING					
Ethernet ports	4	4	4	4	4
Ethernet port speed	100	100	100	100	100
802.11g	Yes	Yes	Yes	Yes	Yes
WEP	Yes	Yes	Yes	Yes	Yes
WPA	Yes	Yes	Yes	Yes	Yes
WPA2	No	Yes	Yes	No	Yes
Bridge mode	Yes	Yes	Yes	Yes	Yes
QUALITY OF SERVICE					
QoS by traffic type (port)	Yes	No	Yes	Yes	Yes
Throttling by wired IP	Yes	No	Yes (RT traffic)	Yes	Yes
Throttling by wireless IP	Yes	No	Yes (RT/WMM traffic)	Yes	Yes
Throttling by E'net jack	Yes	No	Yes	Yes	Yes
QoS by Ethernet jack	No	No	Yes	Yes	Yes
VOIP FEATURES					
Phone handset ports	No	No	2	2	2
Phone line port	No	No	Yes	Yes	Yes
PSTN passthrough	No	No	Yes	Yes	Yes
Simultaneous VoIP calls	No	No	4	2	2
VoIP providers	No	No	1	2	2
NETWORK MGT					
UPnP	Yes	Yes	Yes	Yes	Yes
User def. port fwd slots	Unlimited	20	32	Yes	16
SNMP support	Yes	Yes	Yes	Yes	Yes
SNMP software bundled	No	No	No	Yes	No
EXTRAS					
Server for USB printers	No	No	No	No	No
NAS server - USB storage	No	No	No	No	No
DDNS updating	Yes	No	Yes	Yes	Yes
WARRANTY					
Warranty - months	12	24	12	24	36
Online forum	No	forum1.netgear.com	No	www.zyxel.com.au	No
PERFORMANCE					
Av. ADSL2+ speed*	10.84	10.97	10.10	10.01	10.25
ADSL2+ Speed rank*	4	3	16	17	14
Av. wireless speed**	9.49	8.55	12.76	5.12	12.03
Wireless speed rank**	10	11	5	13	7



Excellent ADSL2+ performance.



Bad performance at 6km.

Good ADSL2+ speed.

Average wireless speed.

Well thought-out user interface; good wireless
Average ADSL2+ speed.

Two-year warranty.

Poor ADSL2+; poor wireless.

Good wireless performance.

Some bugs in user interface.

COMPARISON

Internet security suites

PC security was first delivered via antivirus software. Then it came with firewalls; and now you need net security suites. APC rounds up the latest protection packs.

Antivirus technology served users well before internet access became mainstream. Today, signature-based detection alone will barely protect users from the myriad of threats on the internet. Phishing attempts, network worms, brand-new mass-mailing worms and many other next-generation

threats have rendered the humble virus scanner largely useless by itself. Security-in-depth is an important concept that has trickled into the consumer market from the enterprise security consulting industry. The approach now favoured by vendors is to release combinations of software to keep

out the pests, together with lists of known good/safe software and malware (and alerts if something is attempting to access the internet from a PC). As we discovered, the solutions on offer in today's market vary considerably in terms of features, design, functionality and ease of use.



1 Trend Micro PC-Cillin Internet Security Suite 2006

The Trend Micro Security Suite installs without much fuss, with a couple of idiosyncratic blips. The installer asks if you want to disable the Windows Firewall in order to install the Trend product. There's nothing wrong with that approach, assuming the firewall is switched over at the next reboot, but the nature of the message that popped up during install doesn't exactly leave the user confident that this is the case.

The only reason the Code Red worm still lives in cyberspace (it does) is due to people connecting unpatched and unfirewalled NT type computers to the internet, maybe even just for a couple of minutes. It's enough. So for Trend to disable the Windows Firewall at install time, even for a few minutes, seems a bit silly.

After install, the program launches a help file in Internet Explorer, which triggers a Microsoft security warning and blocks some of the help content. Security software shouldn't freak out security protection mechanisms built into the operating system.

The main console for Trend's suite is fairly intuitive and it is feature-rich. Parents, take note: the content-blocking system works very well for a consumer-end piece of software, but you'll need to know how to set it up properly. Antivirus and spam signatures all update easily and by default the package will maintain itself with a minimum of fuss.

CONTACT	Trend Micro Australia
PHONE	1300 305 289
ONLINE	www.trendmicro.com.au
MARKET	Everyone
PRICE	\$99.95

✓ Will provide adequate protection for the home.

VERDICT ★★★★★

✗ Lacks finesse.

THE QUESTION OF RESOURCES

Security software, when it's working correctly, shouldn't be seen, heard or otherwise noticed. It should sit in the background, detecting and preventing attacks, reading your mail for you and making sure no malware winds up on your system. So it comes as some surprise to see just how much memory

this stuff loved to gobble up. The five fully featured packages – Symantec, Trend, McAfee, Computer Associates and ZoneAlarm – all sucked down a lot of computing power.

Background or idle memory usage was reported by XP in the 20MB (Zone) – 31MB (Trend) range, which

is the equivalent of a heavily loaded office application or even a browser. The background drain on the processor was minimal to negligible in all cases.

If your system is already running at close to capacity, a security suite will put it over the edge

and make things run excruciatingly slowly. The only way to properly run this software is to make sure you have some significant headroom, capacity-wise.

The Core Force project, which is not fully featured, had a negligible effect on overall system resources.

THE BAD NEWS

Many of the features introduced into security software in recent years are ill-considered at best. Take, for example, privacy blockers. They allow you to stop your personal details — like your credit card number, home phone number or address — inadvertently leaking on to the net. It will stop a Trojan from picking up your credit card number — or your young child from sending personal identifying details to creeps.

It's nice in theory, but the basic string matching used by the filters in the suites reviewed was nothing short of appalling. Adding spaces into a credit card number, in the case of Trend, was enough to ensure no alert was triggered. Also, none of these suites will detect the leaking of personal information to any server that is using encryption.

Furthermore, the most basic type of encryption available — rot13, which rotates letters and numbers by 13 places in the alphabet — will defeat this utterly pointless feature.

In all cases, the software only monitors approved applications like mail clients, web browsers and instant messaging programs. It will do very little to stop a well-written Trojan from stealing your most closely guarded personal information.

The content blocking that shipped with many of the packages is another example of boneheaded feature planning. The software worked well

— it was virtually impossible to access porn sites, for example, if that particular box was ticked in any of the packages' configurations — but there was a big problem. Vendors all assumed way too much user knowledge.

The products were tested on a Twinhead Durabook notebook computer running Windows XP with Service Pack 2 applied. One account was set up on the machine. It had administrator privileges and was not protected by a password.

So, it came as some surprise that none of the packages popped up warnings that any parental lock put on the machine could be easily bypassed by most nerdlily inclined six-year-olds.

There was nothing to suggest that the restrictions needed to be applied by an account with administrator privileges to an account *without* administrator privileges. Anyone expecting to stop a teenager from running riot on the net by using this type of software alone, without setting up an appropriate account structure, will be sorely disappointed.

In short, some of the features that have become selling points for the vendors require a bit more thought. Instead of rushing to match each other in a feature war, they should consider going back to first principles.

THE GOOD NEWS

The good news can be summed up in one word: integration. The days of having to buy different products to protect you from the big, bad internet are gone. Most of the major suites come with anti-spam/phishing, anti-spyware/adware, a firewall, antivirus, a privacy blocker, content filtering and many other nifty features. Sadly, in most cases they're excellent examples of technology that was two years ahead of its time four years ago.

Windows Service Pack 2 for XP has also forced the vendors to lift their game. The Service Pack includes a basic firewall on incoming connections (nothing on outgoing).

so software makers have had to stretch themselves a little to add more value in the security stakes.

As you'll see, some vendors are making some real headway. Core Security's product shows us just how advanced security software will be in the future, despite being virtually impossible to use, and Symantec's Norton suite is a finely polished gem.

This software is at a point where it will protect most users from their own actions, something it did less successfully in the past. Security suites like the ones tested here are now a worthwhile investment for any user.

2 McAfee — Internet Security Suite 2006

While it looks a lot more polished than the Trend product, McAfee is a little clunky to install. It required a few reboots and one firewall warning pop-up actually caused the software to crash. Still, after a couple of reboots it was up and running smoothly.

McAfee's suite has one of the best interface panels of all the suites which let you do necessary customisation quite easily. Its Spyware removal tool is excellent, doing a comprehensive job of removing spyware. Like Symantec, McAfee is also developing the concept of the trusted application list, recently buying SiteAdvisor, a US company with a database of trillions of tested and rated web sites, which identifies sites known to have launched everything from spyware and adware to spam and other scams.

As with Trend and ZoneAlarm, this software is acceptable, but not exceptional. All the features are there, but most suites mentioned lack the finesse of Norton and the creative approach of some open source alternatives. If you want something that will do the job, it's fine. If you want something that makes you sleep that little bit better at night, go for the Norton solution.

CONTACT	McAfee
PHONE	1800 644 646
ONLINE	http://au.McAfee.com
MARKET	Everyone
PRICE	\$129.95

✓ Does the job; on-par software that delivers.

VERDICT ★★★★★

✗ Installer could be better.



3 ZoneAlarm Security Suite 6.0/Computer Associates eTrust Internet Security

ZoneAlarm has been around for a long time and it's starting to show its age. It offers a basic firewall, coupled with standard features found in packages of this kind. Like the Trend product, the firewall doesn't do a lot to assess risk. There's a "more information" option on the warnings, which puts it behind Norton (but in front of the others).

When this option is clicked, the program loads up a web page on the ZoneLabs site that can help the user make a more informed decision. At this stage, however, this information repository is far from comprehensive. Still, that's likely to change with time and it's good to see a vendor moving in this direction.

ZoneAlarm was far less verbose than others tested, which is good. Many makers of security software ensure their packages continuously spit out warnings and errors, just so the user knows the software is actually doing something, even if the warnings are confusing. ZoneAlarm silently deleted dodgy attachments APC sent to the test mule with no fuss, which was a nice change.

ZoneAlarm also ships with another nifty capability: it monitors key Windows files and registry keys to make sure nothing screws around with your system.

(NB: Computer Associates have effectively re-skinned ZoneAlarm to use in their eTrust suite — it's the same mud in a different bucket.)

CONTACT	Securetec	✓	Doesn't drive you mad with alerts; monitors Windows files.
PHONE	(03) 9761 0242		
ONLINE	www.zonelabs.com.au	VERDICT	★★★★☆
MARKET	Everyone		
PRICE	\$89.95	✗	Showing its age a little.

4 Symantec — Norton Internet Security 2006

One feature of Norton Security Suite 2006 is immediately impressive: after install, the software begins downloading updates to its signature files, patches and other updates. One of the updates listed is a trusted application list. It shows Symantec understands that the business of protecting computers isn't just about knowing what's bad; it's about knowing what's good, too.

Blacklist technology — which compares incoming files and packets to a list of signatures of nasties — has been around since the '80s. This vendor has realised protection technology can be complemented by a whitelist of "known good" software. McAfee's suite also does this.

Firing up Internet Explorer, the computer didn't throw up the usual consumer message of "Internet Explorer is trying to access the internet, do you want to allow it?" Instead, a message appeared to inform the user that Norton had detected the launch of Internet Explorer and was automatically configuring firewall rules to allow it appropriate access to the internet. Fantastic: this software speaks English, not just geek-speak.

The main console is very slick and easily navigated, and unlike some of the other packages, it looks very professional. The Norton software ran rings around all the others — it's our pick.



CONTACT	Symantec	✓	Protection starts from the moment the install starts.
PHONE	1800 680 026		
ONLINE	http://symantec.com.au	VERDICT	★★★★★
MARKET	Everyone		
PRICE	\$69.99	✗	Can be resource-intensive.

Security alternatives for techies

There are alternatives to the consumer packages mentioned in this roundup, but they're not for the faint of heart. One is Core Force. It's a radically different approach to securing a Windows-based PC and, despite the criticisms we have of it, we're sure it has a bright future.

Unlike the other software tested, the Coresec software is free. It's maintained by an Argentinian-based IT security consultancy that designs penetration-testing software for security consultants.

The basic idea of Core Force is to lock down your computer — every single piece of software on your system can only do what you tell it to. That means that if a virus, worm or human intruder tries to do something that doesn't match your system profile — it won't work.

This software is for advanced users who really understand the way the internet protocol and Windows work. If that's you, then have a go at configuring it. You can lock down precise rules for every single program

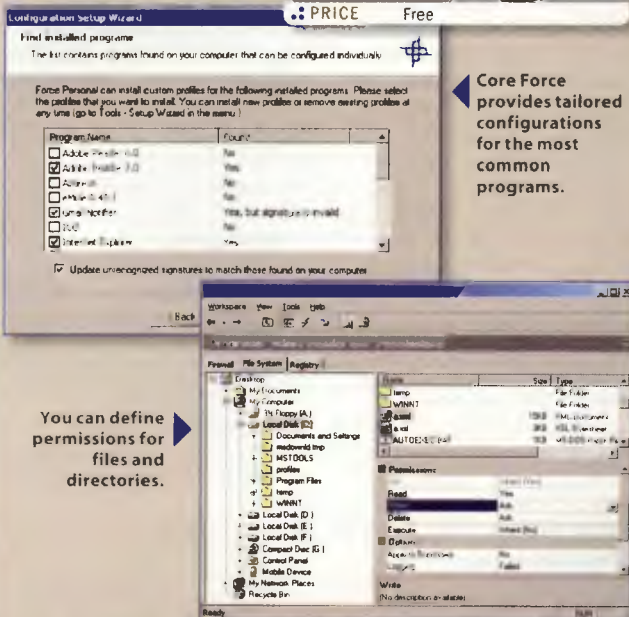
on your computer — including its access to the file system. This means if the process is hijacked, it can't do anything it's not supposed to.

It comes from a concept more commonly discussed in Linux and Unix circles — ensuring that code with access to the internet only has access to what it needs to do its job. That way, if it gets compromised and turns rogue, it can't really screw anything up.

The downside to this program is its lack of usability and features. It's incredibly complex and not very intuitive, plus it's not exactly feature-rich; it's designed to protect you from viruses, worms and human attackers. It won't cover phishing scams or spam. The upside is, if you get it going properly, it will protect you against unknown threats.

Bottom line: For the average user, it's way too complicated — but the technology is very impressive. It's a radically different approach that will work extremely well for those who can work out how to configure it.

CONTACT	Core Secure Technologies
PHONE	N/A
ONLINE	http://force.coresecurity.com
MARKET	Everyone
PRICE	Free

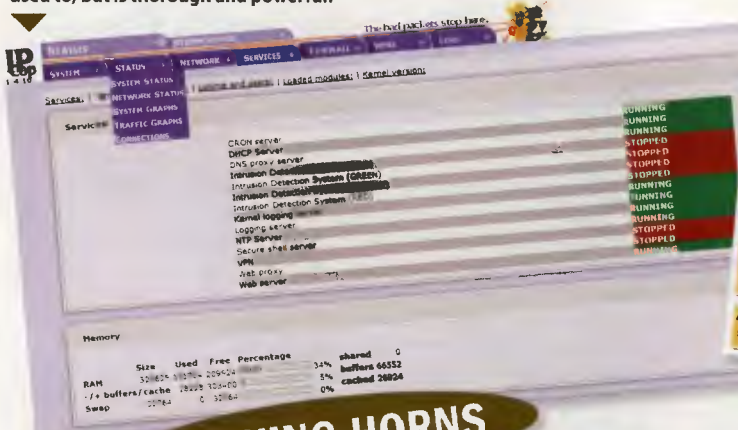


Core Force provides tailored configurations for the most common programs.

You can define permissions for files and directories.



IPCop's web interface takes some getting used to, but is thorough and powerful.



Smoothwall is comprehensive and easy to navigate, but IPCop has the edge.

LOCKING HORNS IPCop vs Smoothwall Express

James Bannan pits two firewalls against each other. Flame on!

I've been running a dedicated firewall at home based on Smoothwall Express (available free from www.smoothwall.org) for about 18 months now. I've got no complaints — it runs like a charm, never crashes and barely needs administering. I was forced to re-examine it, however, when I wanted to make some changes to the network. Specifically, I wanted to add a couple of gigabit network cards to the Smoothwall, for faster transfer between the trusted zone and DMZ. I also wanted to add a wireless router.

The problems started when trying to get Smoothwall to detect the new network cards. It couldn't. Apparently even though the Linux kernel in Smoothwall Express had been updated to support the cards, the drivers haven't been bundled and there's no way to do it manually. Strike one. And my only option for adding a wireless router was to do so in either the trusted zone, which meant that if the router was hacked the protection offered by the Smoothwall would be totally bypassed, or in the DMZ (De-Militarised Zone), which effectively exposed the machines in that network also (and made it difficult for seamless communication for wireless clients).

Then I came across IPCop (available free from www.ipcop.org), so I decided to fire it up on a test machine. The first thing I noticed was just how similar the products are to install and configure. This isn't too

surprising, as the IPCop development team are a split-off group from Smoothwall Express. The initial installation, device selection, setup options and general networking and firewalling principles are almost identical, so if you've ever played around with Smoothwall, IPCop presents no learning curve. One difference is that although IPCop supports ADSL, it doesn't prompt you to configure it during the install.

IPCop detected my gigabit network cards (yay!) and I configured them easily. I noticed, in addition to the three normal interface options (Red, Orange, Green), a fourth (Blue, dedicated for wireless devices). Finally!

NOT EASY BEING ORANGE

In reality, the Blue network zone is very similar to the Orange DMZ zone supported on both products. The idea is that you create a zone which has access out through the Red internet interface but which cannot access the Green trusted zone except through pinholes in the firewall which have to be manually configured. The traditional role of a network DMZ is to house publicly accessible servers like web or FTP servers, but if those servers are compromised then their liability

is contained and the rest of the network is shielded.

However, in the traditional Red + Orange + Green configuration, there's no allowance for wireless networks. The problem with a wireless device like a router or access point is that it is a standalone point of failure. The strongest firewall in the world won't offer any protection if you place an unsecured wireless AP right in the middle of the trusted zone.

Conversely, placing the wireless device in the Orange zone effectively places wireless users in a network area which by design is publicly accessible. When the whole point of the DMZ is to allow the outside world in to access your hosted services, your wireless users won't feel incredibly safe if they know that they're at the same level of security as your web server.

However, before I made my final judgement, I thought I'd better check out the alpha release of Smoothwall 3.0. Thankfully, the gigabit NICs were detected without a problem, but there was no equivalent of IPCop's Blue interface. Additionally, it adhered to Smoothwall 2.0's user configuration of a root user, setup user and admin user (used for the web administration tool). This configuration was always a

little strange, as the root user can log in and launch the setup tool, and it's just another password to remember. IPCop strips it down to two users — root and admin. Much simpler.

The web interfaces on both systems are very similar in terms of the info they provide and the configuration tools and system tools available. They do look different, but this divergence is purely cosmetic.

WHICH WAY?

So, the decision is IPCop — I'm making the move. The better hardware support wasn't the selling point — Smoothwall's next version has just as good a support base, but IPCop's awareness of the need to address the problem of wireless devices, in terms of their security needs and necessary limitations, was just the incentive I needed. The only downside with a Red + Orange + Blue + Green configuration is that if you have an Ethernet broadband modem then the IPCop machine needs four physical network cards. This pretty much precludes using a micro-machine as the firewall — you'll need a system with enough slots to cope. But the security benefits are just too great to ignore. It's IPCop for me. bit.ly



THE STRONGEST FIREWALL WON'T OFFER ANY PROTECTION IF YOU PUT AN UNSECURED WIRELESS AP IN THE MIDDLE OF THE TRUSTED ZONE

Life Insurance for Your Most Important Data



Like most companies, you probably use tape for backups. It's great for everyday use. But tape has a few issues. It can break. It wears out and can become demagnetized. It requires human intervention. All of these issues can put your most valuable data at risk.

The new **OptiVault™ Archival Appliance** solves all of these problems. It uses reliable, archival-grade optical media to backup critical files. Retrieving the data is also simplified with the discs being clearly labelled and readable in standard desktop DVD readers.

OptiVault is the perfect automated solution when you absolutely, positively can't lose:

- Employee emails
- Financial data
- Source code and engineering drawings
- Legal and medical records
- Other irreplaceable files and data

Call **03 9585 8383** or email **sales@region4.com.au** for a copy of our FREE white paper "Life Insurance for Your Most Important Data". You can also visit us on the

PROUDLY
DISTRIBUTED BY



Region4 Pty Ltd
3 Wandarri Court
Cheltenham Vic 3192
Ph: +61 3 9585 8383
Fax: +61 3 9585 8377

Region4 New Zealand Ltd
Unit G, 11 Douglas Alexander Pde
North Harbour, Auckland
Ph: +64 27 2921 383
Fax: +64 9 353 1682

OptiVault is powered by
EMC Dantz Retrospect®
*The world's most highly acclaimed
backup and recovery software.*

PRIMERA
TECHNOLOGY, INC.

home desktops

Plus Corporation Altera FX-60 Ultra 2

CONTACT Plus Corporation PHONE 1800 007 587
ONLINE www.pluscorp.com.au PRICE \$6,250



A real tour de force, centred around an AMD Athlon FX-60 dual-core CPU seated in an ASUS A8N32-SLI motherboard. Comes with an MSI GeForce 7800 GTX 256MB card, 2GB of RAM and two 500GB hard drives. It won the most benchmark tests in our recent Megatest (April).

best overall

Ti AMD Dual 3800 Deluxe

CONTACT Ti Computers PHONE (02) 9437 5437
ONLINE www.ticomputers.com.au PRICE \$1,499



Packs a dual-core AMD 3800+ CPU, a gig of RAM and a 250GB hard drive. In APC's April PC Megatest, it trounced all other similarly priced machines in performance benchmarks. Enough grunt for net browsing, office productivity (and games on weekends). Includes CRT monitor.

best value

THE BEST BUYS

APC's independent reviewers point to the best technologies in the top-selling product categories each month. We only change products when a better one comes along. What you see here are the best buys available on the market right now.

The **Best Overall** award is for products we believe are the best, regardless of price.

The **Best Value** award is for those which offer a good combination of features for a reasonable price.

APC reviewers contributing to the APC Best Buys guide: John Gillooly, Nick Race, Dan Chiappini, Matt Overington, Stephen Withers, Adam Turner and Anthony Caruana.

business desktops

Lenovo ThinkCentre M52

CONTACT Lenovo Australia PHONE 1300 557 073
ONLINE www.lenovo.com/au/en PRICE \$1,300



A state-of-the-art business PC with a host of system management and rescue and recovery utilities, an embedded security chip and integrated Gigabit Ethernet. Small form factor, a Pentium D 930 CPU, 1GB RAM and a 160GB hard disk. Price does not include monitor.

best overall

HP dx5150 SFF Desktop PC

CONTACT HP PHONE 1300 305 017
ONLINE www.hp.com.au PRICE \$960



HP's dx5150 business desktop uses AMD's Athlon 64 X3000+ CPU on an ATI Radeon Xpress 200-based motherboard. The small form factor also packs a plain CD-ROM drive, 512MB of DDR400 RAM and an 80GB hard drive. Modest specs and a competitive price equal an excellent workhorse PC.

best value

NEW ENTRY

motherboards / cpu

ASUS A8n32-SLI Deluxe

CONTACT ASUS PHONE 1300 278 788
ONLINE www.asus.com.au PRICE \$340



For power users, this is still the cream of the crop. With AMD's new AM2 socket only a few months away, this board marks the pinnacle of Socket 939 hardware. A huge feature set plus support for Athlon 64 chips and dual 16x SLI lanes — this board delivers on all fronts.

best overall

Gigabyte GA-K8N-SLI

CONTACT Synnex PHONE 1300 100 100
ONLINE www.synnex.com.au PRICE \$199



The GA-K8N-SLI brings Nvidia's dual-graphics chipset to a reasonably priced motherboard. Enough functionality for a high-performing Athlon 64-based PC and the SLI slots only just lack the bandwidth for ultra high-end cards. You'll need a floppy drive to install Windows.

best value

video cards

ATI Radeon X1900 XTX

CONTACT ATI
PHONE N/A
ONLINE www.atl.com
PRICE Approx \$950



Current performance king and pinnacle of ATI's product line, the X1900 XTX delivers. No faster than a normal X1900 XT when used in dual-card CrossFire setups, but hands down the fastest single card on the market today with all the latest features, eg. Shader Model 3.0 support.

best overall

Nvidia GeForce 7600 GT

CONTACT Nvidia
PHONE N/A
ONLINE www.nvidia.com
PRICE Approx \$375



Nvidia's recently released mainstream card, the GeForce 7600 GT raises the bar for price/performance. With significant performance boosts over the last-generation 6600 GT card, the 7600 GT also comes with support for SLI, allowing performance to spiral even higher.

best value

monitors

Dell 2405FPW

CONTACT Dell
PHONE 1800 812 393
ONLINE www.dell.com.au
PRICE \$1,699



APC's labs team is still in love with Dell's 24in, 16ms screen. With a HD ready 1,920 x 1,200 native resolution, this screen is the perfect size for staring at, just filling one's field of view. Heaps of inputs, a great OSD and no ghosting. The finest possible way to view your PC.

best overall

BenQ FP71G

CONTACT BenQ
PHONE (02) 9352 8800
ONLINE www.benq.com.au
PRICE \$350



Proof that good things can come in small packages, this 17in LCD screen manages to stay at a low price point while still delivering 8ms response time and D-Sub and DVI inputs. Basically packs in everything you need for painless computer usage at a reasonable price.

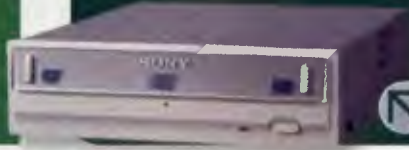
best value

optical drives

Sony DRU810A

CONTACT Sony
PHONE 1300 138 246
ONLINE www.sony.com.au
PRICE \$119

Sony has led the pack in developing top-notch optical drives for years now. Here, double-layer support, a solid software suite and impressive write speeds (16x for DVD+R discs, 8x for DL discs and 48x for CD) round out the feature set. Better yet, it's backed up by a one-year warranty.



best overall

Pioneer DVR-A10XL

CONTACT Pioneer Electronics
PHONE 1800 666 383
ONLINE www.pioneeraus.com.au
PRICE \$99

With DVD-writer prices tumbling all the time, it's hard to go past a drive capable of burning double-layer discs for less than \$100. It's perfect for a home theatre or media box and is available with black, beige or silver front panels. The Nero software suite is even thrown in for good measure.



best value

internal hard disks

Seagate Barracuda 7200.9 500GB

CONTACT Ingram Micro
PHONE 1300 653 333
ONLINE www.ingrammicro.com.au
PRICE \$619



The king of the storage heap with 16MB of cache, full SATA 2.5 spec support, staggered-drive spin-up, hot-plug and hot-swap, NCQ and an incredibly roomy 500GB capacity. It's not the fastest on the block but no slacker either, with an average transfer speed of 52.3MB/s.

best overall

Western Digital WD2500JS 250GB

CONTACT Western Digital
PHONE (03) 9541 8888
ONLINE www.westan.com.au
PRICE \$169



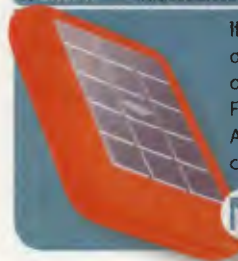
Western Digital's drive delivers 250GB capacity, (the sweet spot in the market right now) but is more reasonably priced than the competition. It's got 8MB of cache, spins at 7,200RPM and has a 300MB/s SATA interface (not that any drive can saturate that at the moment).

best value

external hard disks

LaCie Rugged All-Terrain Hard Drive

CONTACT LaCie Australia PHONE (02) 9669 6900
ONLINE www.lacie.com.au PRICE \$399 (80GB)



If you need to move data from A to B, LaCie's drive is a good bet. The small, rubber-coated orange box sports USB 2.0, FireWire and FireWire 800, and reaches capacities of 120GB. A tad pricey, but zippy performance and the connection interfaces make it a great choice.

best overall

Western Digital Passport Portable HD

CONTACT Western PHONE (01) 9541 8888
ONLINE www.western.com.au PRICE \$269 (80GB)



For those with more modest requirements, it's hard to go past the Passport line. Slim, compact and quick, it works via host power, so you don't generally need to lug a power adaptor. It doesn't ship with a case or software, but if you're just after a mobile repository, who cares?

best value

portable / usb

Sandisk Cruzer Micro

CONTACT Sandisk PHONE 1800 793 652
ONLINE www.sandisk.com PRICE \$72.89 (512MB)



USB memory keys are a part of modern computing. Be it transporting files, storing information or sharing photos, the humble USB key put the final nail in the floppy disk coffin. The Micro offers high transfer speeds in a tiny form factor (with a handy lanyard).

best overall

Corsair Flash Voyager

CONTACT Altech PHONE (02) 8831 9999
ONLINE www.altech.com.au PRICE \$55 (256MB)



Corsair's Flash Voyager is a compelling choice if you care more about storage capacity than diminutive size. It offers a USB 2.0 connection and ships with a 10-year warranty, which should prove ample for anyone looking to move files around between now and say, 2016?

best value

media / nas servers

Buffalo TeraStation Home Server 1.0TB

CONTACT Uniden PHONE (02) 9599 3355
ONLINE www.uniden.com.au PRICE \$1,799



To keep your media library online, you want lots of storage. The TeraStation offers a nominal terabyte (substantially less if configured as RAID 1 or 5), Gigabit Ethernet, support for DNLA media players, four USB ports for external drives (and/or a shared printer) and an FTP server for remote access.

best overall

smb servers

HP ProLiant DL380G4 SAS

CONTACT HP PHONE 1300 305 017
ONLINE www.hp.com.au PRICE From \$6,140

Powered by two Xeon processors up to 3.6GHz, room for six sticks or 12GB of DDR2 and eight hot-plug SAS hard disk drives. Plenty of punch for only two rack units of space (even floppy and optical drives). HP's System's Insight Manager will keep it running and stable.



best overall

Maxtor Shared Storage Plus

CONTACT Maxtor PHONE (02) 9369 3662
ONLINE www.maxtor.com.au PRICE \$399-\$699 (200GB-500GB)

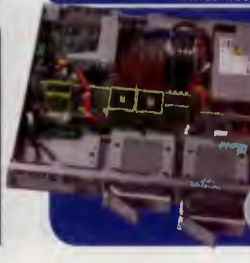


Maxtor's Shared Storage Plus provides 200GB to 500GB of network storage, with the ability to stream media files to UPnP AV media adaptors — without the intervention of a PC. USB ports allow connection of printers and external disk drives for additional storage.

best value

SUN Fire X2100 Server

CONTACT Sun PHONE 1800 628 193
ONLINE www.sun.com.au PRICE From \$992



A fully kitted out X2100 system with an Opteron Model 180 dual-core processor, 2GB of unbuffered ECC DDR400, an 80GB SATA drive and Solaris 10 pre-installed. Comes with a low entry price, but the system is eminently upgradeable and undoubtedly powerful.

best value

notebooks multimedia

Toshiba QOSMIO G30

CONTACT Toshiba ISD PHONE 13 30 70
ONLINE www.isd.toshiba.com.au PRICE \$4,299



When it comes to entertainment on the go, Toshiba has it all sewn up. The flagship model packs a beastly 2.0GHz dual-core CPU, 200GB hard disk, 1GB RAM and an integrated high-def and analogue TV tuner to take advantage of the 17in wide-screen. A powerhouse.

best overall

notebooks business

Lenovo ThinkPad R52

CONTACT Lenovo PHONE 1300 557 071
ONLINE www.lenovo.com/au PRICE From \$1,850



Serious road warriors need look no further. Built to outlast even the most demanding treatment, the R52 is also packed with smart tech to save your business, including biometric fingerprint scanner, power-on and disk passwords (to keep that sensitive data safe).

best overall

Dell Inspiron 9400

CONTACT Dell PHONE 1800 812 393
ONLINE www.dell.com.au PRICE From \$3,500



Dell has a great reputation for offering affordable PCs without skimping on the tech inside. The 9400 is about as good as it gets and gives you mobile performance and gaming (GeForce 7800). Couple this with 1,920 x 1,200 display res and a high-definition TV tuner. Nice.

best value

Dell Inspiron 1300

CONTACT Dell PHONE 1800 812 393
ONLINE www.dell.com.au PRICE From \$998



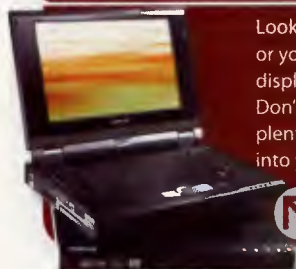
Whatever the size and nature of your business fleet, it's tough to go past Dell. While the business units don't have over-the-top specs, they're amply configured to deal with day-to-day work usage (and the bargain prices will only help sweeten the decision).

best value

notebooks ultraportable

Toshiba Libretto

CONTACT Toshiba PHONE 13 30 70
ONLINE www.isd.toshiba.com.au PRICE From \$3,499



Look closely when shopping for a notebook or you might miss this one. At just 7.2in, the display is tiny (and the keyboard matches). Don't be fooled by the chassis though, there's plenty of grunt inside (and you can throw it into your backpack with room to spare).

best overall

Sony VGNTX27GPT

CONTACT Sony PHONE 1300 138 246
ONLINE www.sony.com.au PRICE \$3,699



The bigger brother of the TX17GP, we were blown away by its crisp display, tiny form factor and battery life. Able to run over eight hours on a single charge (and with an optional extended battery, there's no need to worry if you forget your charger).

best value

handhelds / smartphones

iMate JasJar

CONTACT Carrier Devices PHONE 1300 727 789
ONLINE www.clubimate.com PRICE \$1,699



iMate's JasJar gets as close as any device that we've ever seen to being all things to all people. Sure, it's on the chunky side — but it's part tablet, part PDA and part phone. It's connected in just about any way you can imagine and if you spring for an extra \$50 you get a nice docking station.

best overall

O2 XDA Atom

CONTACT BrightPoint PHONE 1300 300 213
ONLINE www.seeo2.com PRICE \$1,229



O2's XDA Atom is small but packs plenty of punch. There were some early performance issues, but a recent ROM update fixed those. With Bluetooth, Wi-Fi, IR, Tri-band GSM and GPRS (and a bunch of office productivity apps), the Atom smartphone demonstrates that it's a great all-rounder.

best value

consumer printers

Canon Pixma iP6600D

CONTACT Canon PHONE 1800 021 167
ONLINE www.canon.com.au PRICE \$399



Not the speediest printer on the block, but excellent output quality. PictBridge and infra-red support make up for a lack of dedicated card slots, and built-in duplexing will save paper. Offers an (optimised) 9,600 x 2,400dpi; ships with both Mac and Windows software.

best overall

Epson Stylus Photo R230 Colour Printer

CONTACT Epson PHONE 1300 361 054
ONLINE www.epson.com.au PRICE \$199



Has brought superb photo quality (previously found only in more expensive photo printers) to a sub-\$200 price range. With six ink cartridges, the R230 produces border-free prints on paper ranging from 4 x 6in to A4 (at up to 15ppm) and also prints directly to compatible CD/DVDs.

best value

smb printers

HP Officejet Pro K550

CONTACT HP PHONE 1300 305 017
ONLINE www.hp.com.au PRICE \$349



Total cost of ownership is the benchmark for business performance and the speedy K550 doesn't disappoint, with a USB interface and a 250-sheet tray, while four ink tanks minimise the time between cartridge changes. The 1,200dpi text output is remarkably quick and clear. An Ethernet port is provided on the K550dtn (for \$499).

best overall

Lexmark P915

CONTACT Lexmark PHONE (02) 9930 3500
ONLINE www.lexmark.com.au PRICE \$199



If the bottom line is all important and you've got modest requirements, Lexmark's P915 is an inexpensive printer offering reasonable output quality. The six-colour print engine also spits out acceptable photo prints, allowing it to serve a number of functions.

best value

multifunction consumer

Canon Pixma MP780

CONTACT Canon PHONE 1800 021 167
ONLINE www.canon.com.au PRICE \$549



Solid paper handling, quick scanning, PC and Mac support, and individual ink tanks complement outstanding print quality for a top-notch multifunction printer. It packs a PictBridge port and comes with standard fax support, but doesn't include an Ethernet port.

best overall

Brother MFC-5840CN

CONTACT Brother PHONE (02) 9887 4344
ONLINE www.brother.com.au PRICE \$429



An automatic document feeder, dual-input paper trays, Ethernet support and media card slots help make the MFC-5840CN a winner for shoppers on a budget. Unfortunately, it's a bit slow and output isn't crystal clear (but excellent value nonetheless). Fax support is a boon.

best value

multifunction smb

HP Colour LaserJet 2840 All-in-One Printer

CONTACT HP PHONE 1300 305 017
ONLINE www.hp.com.au PRICE \$1,699



Launched in the middle of last year, HP's Colour LaserJet 2840 All-in-One is the proven star for small business, providing exceptional quality colour printing at a price that's affordable for the sector. The only downside is slow print speed; 4ppm colour/19ppm black.

best overall

Brother MFC-9420CN

CONTACT Brother PHONE (02) 9887 4344
ONLINE www.brother.com.au PRICE \$1,599



\$100 cheaper than the HP Colour LaserJet 2840, but in many ways the new Brother is a better MFC, with faster print speeds (8ppm colour/31ppm black), built-in management and security features and high-capacity replacement toners. Cost savings = best value.

best value

adsl modems

Billion 7404VGP

CONTACT PC Range
PHONE (08) 8322 9544
ONLINE www.billion.com.au
PRICE \$299

It's hard to beat Billion's 7404VGP on features and price. For your \$299, you get one of the fastest ADSL2+ modems in terms of actual throughput (average over 1km and 3.5km phone line length), robust 802.11g wireless networking (supporting WPA2 security) and four Ethernet ports. There's inbuilt VoIP and PSTN passthrough (if the VoIP ever fails).

NEW
ENTRY

best overall

Billion 7300G

CONTACT PC Range
PHONE (08) 8322 9544
ONLINE www.billion.com.au
PRICE \$169

Despite its low price, the Billion 7300G managed to trump all the other modems in this month's ADSL2+ Labs Challenge on average speed across 1km and 3.5km line lengths. It includes four 10/100 ports as well as 802.11g (including WEP, WPA and WPA-2 security). The modem has configurable Quality of Service, too.

NEW
ENTRY

best value

wireless routers

Linksys WRT54GP2

CONTACT Linksys
PHONE 1800 678 808
ONLINE www.linksys.com.au
PRICE \$249.95

VoIP is becoming a significant part of broadband usage, so it makes sense to buy a router that supports it. The WRT54GP2 hardware has a two-port VoIP ATA and a three-port Ethernet switch. The firmware includes an SPI firewall and offers above-average flexibility.

NEW
ENTRY

best overall

Linksys WRT54G

CONTACT Linksys
PHONE 1800 678 808
ONLINE www.linksys.com.au
PRICE \$139.95

A solid, well-regarded wireless router. Includes a four-port Ethernet switch and an SPI firewall, but leaves out the extras that aren't needed by everybody, such as VPN, VoIP and print server.

If you're on a tight budget, you might get better value from a modem/router combo.

NEW
ENTRY

best value

voip adaptors

NetComm V300

CONTACT NetComm
PHONE (02) 9424 2070
ONLINE www.netcomm.com.au
PRICE \$199.10

Low upstream speeds on most broadband connections mean QoS support makes a big difference to how you sound during a VoIP call. In APC's testing, the V300 delivered good voice quality with minimum impact on data traffic. It also lets you use one handset for VoIP and PSTN calls.

best overall

NetComm V100

CONTACT NetComm
PHONE (02) 9424 2070
ONLINE www.netcomm.com.au
PRICE \$128

Connect the V100 to a power point, your network and a handset, and you're in business. Available as a generic model or preconfigured for certain VoIP providers, which makes it as simple as it gets. Some people prefer a box that allows more diddling around, but we're attracted to the simplicity.

best value

gps devices

TomTom Go500

CONTACT TomTom
PHONE N/A
ONLINE www.tomtom.com
PRICE \$1,099

Feature-rich and easy to use, the Go500 delivers a truckload of features that are so well put together you're scarcely aware of them all, plus, the Go500 acts as a wireless Bluetooth speakerphone for your mobile. Route calculation is fast and easy to use. Brilliant.

best overall

StreetPilot c320

CONTACT GME Electrophone
PHONE (02) 9844 6666
ONLINE www.gme.net.au
PRICE \$899

It just works — when you can say that about a complex piece of hardware you know you're on a winner. StreetPilot's c320 tells you how to get from A to B simply. It's not as feature-rich as other GPS receivers but what it does it does well. For GPS on a budget, this is it.

best value

digital cameras

Canon EOS-1Ds Mark II

CONTACT Canon
PHONE 13 13 83
ONLINE www.canon.com.au
PRICE \$12,999



When it comes to superb image-quality photography, it's hard to go past Canon. If Canon keeps bringing out models even half as good as the 1Ds, then 35mm has truly had its day. If you're looking to drop some serious cash for seriously good images, look no further.

best overall

Kodak EasyShare V550

CONTACT Kodak
PHONE 1800 267 588
ONLINE www.kodak.com.au
PRICE \$599



Compact, sexy and easy to use, this is the epitome of technology. Kodak has whacked a nice big 2.5in LCD on the back, while the 5MP and 3x optical zoom makes it anything but a slouch when you need a sharp, focused precious moment. Ease of use will help first-timers get up and snapping.

best value

digital video cameras

Canon XL H1

CONTACT Canon
PHONE (02) 9805 2000
ONLINE www.canon.com.au
PRICE \$13,999



The biggest, baddest camera on the HD scene. It might break the bank, but definitely provides unparalleled images. 1080i HD on 3CCDs. Image controls to get excellent film-like results. XLR audio. Interchangeable lenses. Essentially, a thing of beauty.

best overall

Panasonic NV-GS300

CONTACT Panasonic
PHONE 13 26 00
ONLINE www.panasonic.com.au
PRICE \$1,539



This is a close-fought category, but the GS300 sets itself apart by delivering 3CCD at an amazing price. With optical stabilisation, 10x zoom and Leica lensing, this is a great little unit. No built-in effects, but who has ever used them and not regretted it later?

best value

projectors

BenQ PE7700

CONTACT BenQ
PHONE (02) 9352 8800
ONLINE www.benq.com.au
PRICE \$4,999



The PE7700 offers excellent picture clarity and tone, a wide-screen native resolution of 1,280 x 768 pixels and a 3,000-hour lamp life. Support for progressive scan mode, dual-composite and HDMI inputs and a backlit remote control make this BenQ unit hard to beat.

best overall

Toshiba S8 DLP

CONTACT Toshiba
PHONE (02) 9887 6000
ONLINE www.toshiba.com.au
PRICE \$1,999



If you're after a basic projector to handle some gaming, movies and web surfing, the S8 is a safe bet. 800 x 600 pixel resolution, 2,000:1 contrast ratio, and composite, S-Video and VGA inputs. Better still, the 10,000-hour lamp life means you won't have to buy pricey bulbs every few months.

best value

tv tuners

Pinnacle PCTV 310i

CONTACT Lako Pacific
PHONE (03) 9455 7444
ONLINE www.lakopacific.com
PRICE \$199.99



What's not to like about the 310i? With analogue and digital TV tuners (plus FM radio) on one card, it's the complete package. The software delivers PVR features with recording to DivX or MPEG-2 files, or direct to DVD. A remote control is included; there's even an S-Video/composite input to digitise analogue home videos.

best overall

Leadtek WinFast TV2000 XP Expert

CONTACT Compucon (and others)
PHONE (02) 9496 5888
ONLINE www.compucon.com.au
PRICE \$95



A very affordable analogue TV and FM radio card. The setup might not be the easiest or the supporting software the slickest on the market, but it provides plenty of features — including a remote control — for your money and can deliver good results. PVR functions include time-slip.

best value

media adaptors

Zensonic Z500 HD Network DVD player

CONTACT Zensonic PHONE (08) 8322 9544
 ONLINE www.zensonic.com.au PRICE \$569

If you want to get your digital media from the study to the lounge room, the Z500 can handle anything you throw at it. It's a progressive-scan MPEG4/DVD player with HDCP-compatible HDMI, plus built-in Ethernet and 802.11b/g for streaming internet access and playing music, photos and movies from any PC on your home network.



best overall

Zensonic Z340 DVD/MPEG4 player

CONTACT Zensonic PHONE (08) 8322 9544
 ONLINE www.zensonic.com.au PRICE \$169

Practically anything you can burn to disc or copy to a memory card — whether it's music, photos or movies — the Zensonic Z340 DVD/MPEG4 player can play. A region-free progressive-scan DVD player, will convert NTSC DVDs to PAL on the fly (and vice versa). It also sports VGA and component video outputs, along with built-in surround sound decoding.



best value

HD LCD televisions

Loewe Xelos A 37 DVB-TC

CONTACT International Dynamics PHONE (03) 9429 0822
 ONLINE internationaldynamics.com.au PRICE \$6,499



Big LCD TVs are ready for prime time, but it's hard to find them with built-in digital tuners. The Xelos A 37 DVB-TC provides 94cm of widescreen goodness and, for an extra \$1,000, comes with a dual SD tuner and built-in 80GB hard drive recorder.

best overall

Panasonic TX-27LWD500A

CONTACT Panasonic PHONE 13 26 00
 ONLINE www.panasonic.com.au PRICE \$2,799



Built-in analogue/SD/HD tuners help the Panasonic TX-27LWD500A stand out as an excellent starting point for getting HD action into your lounge room. Along with a 68cm wide-screen and HDCP-compatible HDMI input, it's also got a 6-in-1 memory card reader.

best value

personal video recorders

Topfield TF5000PVRT Masterpiece

CONTACT Topfield PHONE 1300 889 803
 ONLINE www.topfield.com.au PRICE \$1,199

If you're ready to revolutionise your TV viewing, this'll let you skip ads, pause live TV and record two programs at once. It sports twin SD digital tuners and a 160GB hard drive, plus the Ice TV Electronic Program Guide lets you "set and forget" the Masterpiece and never miss your favourite show again.



best overall

Legend Digital LPVR080

CONTACT Legend Digital PHONE (02) 8223 9656
 ONLINE www.legenddigital.com PRICE \$600

The Legend Digital LPVR080 also sports twin standard-definition digital tuners along with an 80GB hard drive (up to 400GB is available). Along with PVR features like pausing live TV and ICE TV-compatibility, it lets you copy across MP3 and JPEG files from your computer via USB so you can play them on your TV and stereo.



best value

handheld media players

Archos AV500 Digital Video Recorder

CONTACT World Tech PHONE (03) 9310 3497
 ONLINE www.worldtech.com.au PRICE \$945 (30GB)

Forget about dinky mobile phones and MP3 players touting fuzzy video clips — the AV500 sports a beautiful 10.2cm screen. Up to 100GB of storage puts your entire movie collection in your pocket, and you can record from external video sources.



best overall

Zvue 200A

CONTACT World Tech PHONE (03) 9310 3497
 ONLINE www.worldtech.com.au PRICE \$189

The Zvue 200A is a video player stripped to the bare essentials — no built-in speaker, rechargeable battery or hard drive — but the 2.5in full colour display is surprisingly watchable. If you're after a dirt-cheap player, that has low screen resolution (but isn't a piece of junk), you'll be pleasantly surprised.

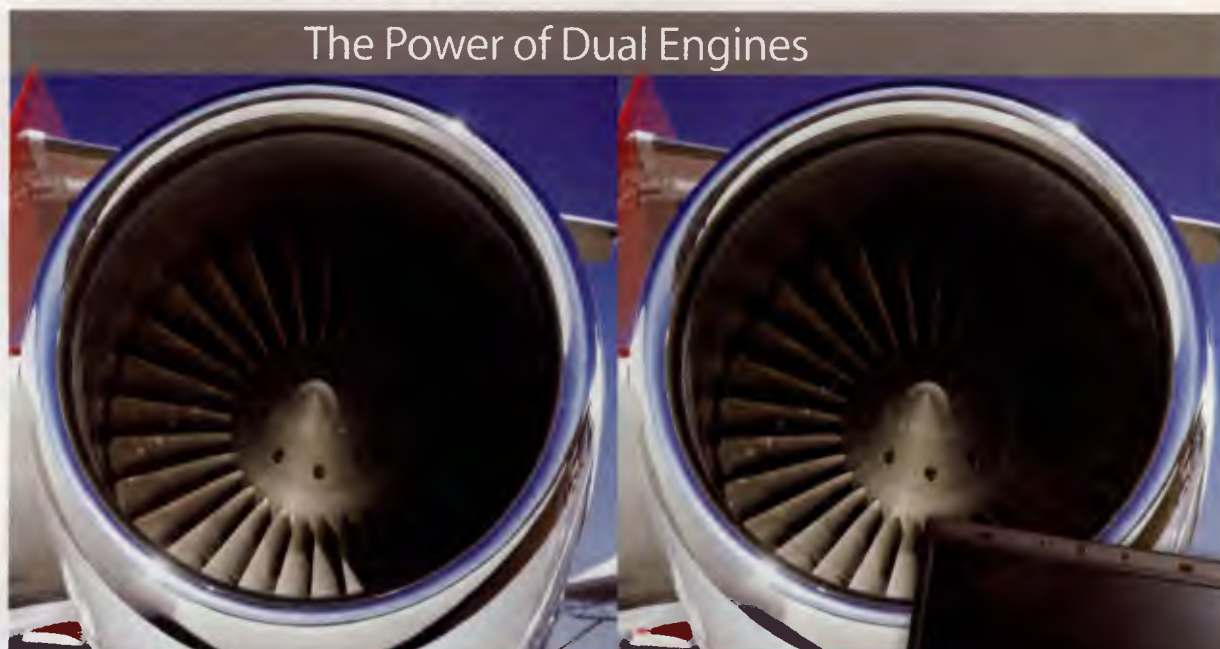


best value

NEW ENTRY

Experience Revolutionary Mobile Performance.

Choose Intel® Centrino® Duo Mobile Technology in your MACRON NX150 and you're more mobile than ever.



The Power of Dual Engines

Your choice of:

CPU

Hard Drive

Keyboard

Memory

Operating System

Warranty



MACRON NX150

Different usage of the notebook demands different configurations – whether it is gaming, creative, business or leisure, the MACRON Build-to-Order notebooks give you choices and possibilities of creating a fully personalised notebook built in Australia.

Featuring the powerful Intel® Centrino® Duo Mobile Technology with the latest Intel® Core™ Duo Processor and National on-site warranty, the MACRON NX150 delivers revolutionary performance and reliability – making it ideal for users who want a true customisable mobile computing experience.

Contact Us Today for Your Personalised MACRON Notebook!
Your notebook. Your Choice. Customise now.

MACRON

Phone MOEBIUS at 1300 360 022
Visit www.todaytech.com.au/macron

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, and Intel Centrino logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. MOEBIUS, MACRON, and Microsoft are the property of their respective owners. Wireless connectivity and some features may require you to purchase additional software, services or external hardware. Availability of public wireless LAN access points is limited, wireless functionality may vary by country and some hotspots may not support Linux-based Intel Centrino Mobile Technology systems. System performance measured by MobileMark 2002. System performance, battery life, wireless performance and functionality will vary depending on your specific operating system, hardware and software configurations.

Telstra cuts wireless prices

The prices don't beat Unwired, but BigPond Wireless is more of an attractive option now than it was before, writes *William Maher*.

This Telstra price cut will come as good news, especially to travellers or those people outside Sydney wanting a wireless alternative to Unwired.

New starter pricing for 256Kbits/s 200MB download plans have dropped from \$69.95 per month to \$49.95. The 1GB plan also falls from \$99.95 to \$79.95 per month.

This model is closer than it was to Unwired's pricing, which at the time of writing charged \$29.95 per month for 300MB monthly download limits at 256Kbits/s. By comparison, Optus was charging \$39.95 for a 200MB monthly download limit at 384Kbits/s download speeds using 3G.

For light users, Telstra has also introduced hourly time-based plans — prices start at \$29.95 for 10 hours access at 512Kbits/s.

Telstra has the strongest coverage of any wireless mobile provider in Australia, though others are improving their coverage. Unwired recently announced it would move into the Melbourne market. Customers can log on from Melbourne's CBD and "inner city suburbs", with Unwired promising coverage from the Docklands to Richmond, Fitzroy to Middle Park and Port Melbourne to Toorak. Coverage will then be extended to Flemington, Clifton Hill, Collingwood and North Melbourne, said a company statement.

With companies Unwired, Telstra, Optus and others spending millions on upgrading to faster wireless in the future, the future is looking rosier than ever for those considering the switch to wireless internet.

However, these improved wireless technologies can't come too soon. As Dan Warne's extensive wireless internet testing showed (APC April, page 68), variable ping times mean that the technology might be great for general net browsing and email — but could suffer in comparison to ADSL when it comes to VoIP.

Whether new technologies like 3G HSDPA or WiMax improve this situation remains to be seen.

your monthly broadband guide

APC is proud to partner with the independent broadband price-monitoring service Broadband Choice (broadbandchoice.com.au) to bring you the best ADSL and cable deals.

The comparison table on the following pages focuses on internet service providers that best serve the majority of APC readers' needs — those that have national coverage (though we have included some ISPs that provide higher than 2Mbit/s speed services in limited areas).

Only those meeting at least three of our four plan selection criteria are listed:

•**Budget plan:** cheapest deal under \$35/month.

•**Light plan:** cheapest deal under \$65/month, with at least 512Kbit/s speed and 1GB data.

•**Family plan:** largest download allowance under \$80/month, at least 512Kbit/s and 10GB data.

•**High speed:** cheapest 1.5Mbit/s plan under \$100/month, with 10GB data minimum.

If an ISP has "unlimited downloads" but speed is throttled after reaching a certain limit, the portion in which you can get full-speed downloads is listed as its limit.

APC has picked the lowest price for a contract period of six months or less for broadband installation. Otherwise, the lowest-priced option was selected.

The installation price doesn't include a modem because you may find you'll get better value by buying one separately.

Can't find your provider in our list? That's because some of the largest ISPs, and many smaller ones, didn't meet the selection criteria. There may be ISPs we didn't list that will provide better deals but only service your local area or state.

ISPs enter their own information into the Broadband Choice database. ISPs can contact bc@whirlpool.net.au for more details on how to become part of the database.

Data for our table was extracted from the Broadband Choice database on 19 April 2006.

in brief

ADSL2+ GAINING GROUND

More ISPs are expanding into faster fixed-line broadband via ADSL2+. Exetel has, from April, begun switching on exchanges in Sydney and Melbourne (see more at <http://forum.exetel.com.au>). 12-month plans (without line rental) start at \$30 per month for 1GB of downloads during peak time. Meanwhile, TPG pricing starts at \$29.99 for 600MB and increases to \$39.99 for 6GB.



LINKSYS COMBINES WI-FI/3G

Tapping into the market of roving groups of laptop users who need to share wireless broadband on the go, Linksys has launched an 802.11g wireless router/modem designed to connect to a 3G broadband connection. Up to five users can connect, and the system relies on a (separately sold) 3G card from Vodafone.





Name	Phone	Online	Budget plan (under \$35)	Light plan (under \$60, at least 512Kbit/s, minimum 1GB data limit)	Family plan (under \$80, at least 512Kbit/s, minimum 10GB data limit)	High-speed plan (under \$100, at least 1.5Mbit/s, minimum 10GB data limit)	National	Spam filtering	Setup fee & contract length	Rapid transfer
Super-fast broadband ISPs (faster than 1.5Mbit/s)										
iiNet broadband2+ ADSL (24Mbit/s)	13 19 17	www.iinet.net.au	\$29.95† 600MB 24Mbit/s	\$39.95† 4GB+ 24Mbit/s	\$69.95† 20GB+ 24Mbit/s	\$49.95† 10GB+ 24Mbit/s	✓	✓	\$119 6mths	✗
Internode Extreme ADSL2+	13 66 33	www.internode.on.net	N/A	\$59.95 20GB 24Mbit/s	\$79.95 40GB 24Mbit/s	\$59.95 20GB 24Mbit/s	✗	✓	\$129 6mths	✗
Primus up to 8000Kbit/s	1300 854 848	www.primus.com.au	\$29.95† 1GB 8Mbit/s	\$29.95† 1GB 8Mbit/s	\$69.95† 20GB 8Mbit/s	\$49.95† 10GB 8Mbit/s	✓	\$2	\$119 12mths	✗
OptusNet Cable	1800 504 504	http://broadbandsales. optusnet.com.au	\$29.95† 300MB+ 10Mbit/s	\$39.95† 2GB+ 10Mbit/s	\$69.95† 20GB+ 10Mbit/s	\$69.95† 20GB+ 10Mbit/s	✗	✓	\$39 12mths	✗
OptusNet DSL Direct	1800 504 504	http://broadbandsales. optusnet.com.au	\$29.95† 300MB+ 24Mbit/s	\$39.95† 2GB+ 24Mbit/s	\$59.95† 10GB+ 24Mbit/s	\$59.95† 10GB+ 24Mbit/s	✗	✓	\$89 12mths	✓
OzEmail broadband2+ 24Mbit	13 35 93	www.ozemail.com.au	\$29.95† 600MB 24Mbit/s	\$39.95† 4GB+ 24Mbit/s	\$69.95† 20GB+ 24Mbit/s	\$49.95† 10GB+ 24Mbit/s	✓	✓	\$119 6mths	✗
People Telecom ADSL2+	1300 795 833	www.peopletelecom.com.au	N/A	\$49.95† 10GB 24Mbit/s	\$69.95† 25GB 24Mbit/s	\$49.95† 10GB 24Mbit/s	✗	✓	\$99 12mths	✗
Primus AOL 2000K+	1800 265 777	www.primusonline.com.au	\$29.95* 400MB 2Mbit/s	\$49.95 12GB 2Mbit/s	\$49.95 12GB 2Mbit/s	\$49.95 12GB 2Mbit/s	✗	✗	\$149 3mths	✗
Telstra BigPond Cable	13 12 82	www.bigpond.com	\$29.95* 200MB^ 10Mbit/s	\$59.95† 10GB^ 10Mbit/s	\$59.95† 10GB^ 10Mbit/s	\$59.95† 10GB^ 10Mbit/s	✗	\$2.50	\$189 3mths	✗
TPG Residential ADSL2+	1300 360 855	www.tpg.com.au	\$29.99* 600MB 24Mbit/s	\$39.99 6GB 24Mbit/s	\$59.99 30GB 24Mbit/s	\$49.99 18GB 24Mbit/s	✗	✓	\$59.95 12mths	✗

Regular broadband ISPs (1.5Mbit/s or less)										
AAPT ADSL	13 88 88	www.aapt.com.au	\$29† 500MB 256Kbit/s	\$39† 12GB 512Kbit/s	\$59† 15GB 1.5Mbit/s	\$59† 15GB 1.5Mbit/s	✓	✓	\$0 1mth	✓
Aardvark Internet	1800 227 382	www.aardvark.net.au	\$29.95* 200MB 256Kbit/s	\$45* 1.5GB 512Kbit/s	\$78.50 30GB 512Kbit/s	\$84.50 10GB 1.5Mbit/s	✓	✓	\$130 6mths	✓
Alphalink	1300 360 638	http://home.alphalink.com.au	\$29.70* 200MB 256Kbit/s	\$44.90 1GB 512Kbit/s	\$69.90 10GB 512Kbit/s	\$99.90 10GB 1.5Mbit/s	✓	✓	\$121 1mth	✓
AuNix Broadband	1300 765 742	www.aunix.com.au	\$29.95* 15GB 256Kbit/s	\$39.95* 25GB 512Kbit/s	\$66.95* 35GB 1.5Mbit/s	\$66.95* 35GB 1.5Mbit/s	✓	✓	\$99 1mth	✓
Australis Internet ADSL	1300 722 050	www.australis.net	N/A	\$49.95 25GB 512Kbit/s	\$75.95 35GB 1.5Mbit/s	\$75.95 35GB 1.5Mbit/s	✓	✓	\$169 1mth	✓
Australis Internet Bundled ADSL/Phone	1300 722 050	www.australis.net	\$29.95† 1GB 256Kbit/s	\$44.95† 25GB 512Kbit/s	\$69.95† 35GB 1.5Mbit/s	\$69.95† 35GB 1.5Mbit/s	✓	✓	\$169 1mth	✓
Aztec ISP Home broadband	1300 768 513	www.aztec.aunz.com	N/A	\$44.95 25GB 512Kbit/s	\$74.95 35GB 1.5Mbit/s	\$74.95 35GB 1.5Mbit/s	✓	✓	\$129 12mths	✓
BIT.net	1300 248 638	www.bit.net.au	\$31.95 2GB 256Kbit/s	\$41.95 2GB 512Kbit/s	\$69.95 No limit 512Kbit/s	\$89.95 25GB 1.5Mbit/s	✓	✓	\$99 6mths	✓
BKB Internet Residential ADSL	1800 252 638	www.bkb.net.au	N/A	\$49.95 1GB 512Kbit/s	\$69.95 10GB 512Kbit/s	\$99.95 10GB 1.5Mbit/s	✓	✓	\$139 6mths	✓
Blackstump Solutions ADSL	1800 890 600	www.blackstump.net.au	\$17.95* 200MB 256Kbit/s	\$39.95* 5GB 512Kbit/s	\$74.95 35GB 1.5Mbit/s	\$67.95† 10GB 1.5Mbit/s	✓	✓	\$108 1mth	✓
BBi Flat Rate DSL	1300 730 720	www.brownbear.com.au	\$32.95 2GB 256Kbit/s	\$39.95 2GB 512Kbit/s	\$74.95 60GB 512Kbit/s	\$81.95 15GB 1.5Mbit/s	✓	✓	\$119 6mths	✓
BBi Excess DSL	1300 730 720	www.brownbear.com.au	\$32.95* 2GB 256Kbit/s	\$39.95* 2GB 512Kbit/s	\$74.95 60GB 512Kbit/s	\$81.95† 15GB 1.5Mbit/s	✓	✓	\$119 6mths	✓
CEInternet Broadband	1800 222 256	www.ceinternet.com.au	\$29.95* 200MB 256Kbit/s	N/A	\$79.95 10GB 512Kbit/s	\$99.95 10GB 1.5Mbit/s	✓	\$2.50	\$99 1mth	✓
Cheetah by Ozieweb	1300 727 374	www.cheetah.net.au	\$29.95* 200MB 256Kbit/s	N/A	\$69.95 15GB 512Kbit/s	\$99.95 15GB 1.5Mbit/s	✓	✓	\$129 6mths	✓
Comcen Internet	1300 300 324	www.comcen.com.au	\$19.99* 200MB 256Kbit/s	\$39.99* 1GB+ 512Kbit/s	\$79.99 No limit 512Kbit/s	\$69.99* 15GB+ 1.5Mbit/s	✓	✓	\$99 6mths	✓
ComeOnAussie Home ADSL	1300 361 317	www.comeonaussie.net	\$34.95* 1GB 256Kbit/s	\$41.95* 2GB 512Kbit/s	\$74.95† 35GB 1.5Mbit/s	\$74.95† 35GB 1.5Mbit/s	✓	✓	\$179 1mth	✓
ComeOnAussie Business ADSL	1300 361 317	www.comeonaussie.net	N/A	\$49.95† 25GB 512Kbit/s	\$79.95† 35GB 1.5Mbit/s	\$79.95† 35GB 1.5Mbit/s	✓	✓	\$179 6mths	✓
Concept Networks Stamina	1300 132 331	www.conceptual.net.au	\$29.95* 250MB 256Kbit/s	\$59.95† 16GB 512Kbit/s	\$69.95 No limit 512Kbit/s	N/A	✓	✓	\$99 6mths	✓
Connexus Home ADSL	1300 133 888	www.connexus.net.au	\$27.95* 200MB^ 256Kbit/s	\$59.95 10GB^ 512Kbit/s	\$59.95 10GB^ 512Kbit/s	N/A	✓	✓	\$149 6mths	✗
Crazy Broadband	1300 248 638	www.crazy.com.au	\$29.95* 250MB 256Kbit/s	\$42.95 2GB 512Kbit/s	\$49.95 20GB 512Kbit/s	\$82.95 20GB 1.5Mbit/s	✓	✓	\$140 6mths	✓
Curl DSL	1300 135 908	http://curl.com.au	\$29.95† 15GB 256Kbit/s	\$39.95† 25GB 512Kbit/s	\$64.95† 35GB 1.5Mbit/s	\$64.95† 35GB 1.5Mbit/s	✓	✓	\$99 6mths	✓
Cybernet ADSL	1300 133 599	www.cybernetinternet.net	\$29† 1GB 256Kbit/s	\$39† 1GB 512Kbit/s	\$79.95 35GB 1.5Mbit/s	\$79.95 35GB 1.5Mbit/s	✓	\$5.50	\$49 12mths	✓
CyberOne ADSL	1300 720 062	www.cyberone.com.au	\$15.95* 200MB 256Kbit/s	\$54.95 No limit 512Kbit/s	\$54.95 No limit 512Kbit/s	\$84.95 No limit 1.5Mbit/s	✓	✓	\$0 1mth	✓
DCSI	1300 665 575	www.dcsi.net.au	\$29.95 500MB 256Kbit/s	\$49.95 10GB 512Kbit/s	\$59.95 20GB 512Kbit/s	\$79.95 20GB 1.5Mbit/s	✓	✓	\$125 6mths	✓
Dodo	13 16 02	www.dodo.com.au	\$19.90† 250MB^ 256Kbit/s	\$34.90† 1GB^ 512Kbit/s	\$64.90† No limit 512Kbit/s	\$64.90† 30GB^ 1.5Mbit/s	✓	\$1.90	\$119 1mth	✓
E-SOUL	1300 367 258	www.esoulnet.com.au	N/A	\$59.95 25GB 512Kbit/s	\$59.95 25GB 512Kbit/s	\$99.95 35GB 1.5Mbit/s	✓	✓	\$129 6mths	✓
Empcom ADSL Service	1300 731 368	www.empcom.net	\$25 1GB 256Kbit/s	\$35 1GB 512Kbit/s	\$65 No limit 512Kbit/s	\$75 10GB 1.5Mbit/s	✓	✓	\$129 6mths	✓
FutureWeb Pty Ltd	1300 361 355	www.futureweb.com.au	\$31.95* 200MB 256Kbit/s	\$49.95 1.5GB 512Kbit/s	\$73.95 15GB 512Kbit/s	N/A	✓	✓	\$120 6mths	✓
Gday.net ADSL Broadband	1300 668 640	http://telecom.gday.net	\$24.95* 300MB^ 256Kbit/s	N/A	\$69.95 10GB^ 512Kbit/s	\$99.95 10GB 1.5Mbit/s	✓	✗	\$129 1mth	✓
Global Dial ZapDSL	1300 130 710	www.globaldial.com	\$29.95* 300MB 256Kbit/s	\$49.95 2GB+ 512Kbit/s	\$79.95 No limit 512Kbit/s	\$89.95 14GB+ 1.5Mbit/s	✓	✓	\$99 6mths	✓
Glocomm Broadband - ADSL	1300 728 392	www.glocomm.net.au	\$32.95* 500MB 256Kbit/s	\$46.95* 3GB 512Kbit/s	\$72.95 35GB 1.5Mbit/s	\$72.95 35GB 1.5Mbit/s	✓	✓	\$179 1mth	✓
Goldweb ADSL	1300 366 065	www.goldweb.com.au	\$29.95* 200MB 256Kbit/s	\$55 1.5GB 512Kbit/s	\$80 15GB 512Kbit/s	N/A	✓	✓	\$139 1mth	✓
Hande Communications RG xDSL	1300 306 131	www.hande.com.au	\$33.70 1.5GB 256Kbit/s	\$44.95 7.5GB 512Kbit/s	\$73.10 15GB 1.5Mbit/s	\$73.10 15GB 1.5Mbit/s	✓	✓	\$139.95 1mth	✓
Hylinx ADSL	1300 132 014	www.hylinx.com	N/A	\$39.95† 25GB 512Kbit/s	\$69.95† 35GB 1.5Mbit/s	\$69.95† 35GB 1.5Mbit/s	✓	✓	\$129 6mths	✓
iiNet broadband1 ADSL	13 19 17	www.iinet.net.au	\$29.95† 600MB 512Kbit/s	\$39.95† 4GB+ 512Kbit/s	\$69.95† 20GB+ 1.5Mbit/s	\$69.95† 20GB+ 1.5Mbit/s	✓	✓	\$119 6mths	✓
Infinity Plus Residential DSL	1300 726 340	www.infinityplus.net.au	N/A	\$49.95† 25GB 512Kbit/s	\$79.95† 30GB 1.5Mbit/s	\$79.95† 30GB 1.5Mbit/s	✓	✓	\$100 6mths	✓
Instant Communications ADSL	1300 139 369	www.in.com.au	N/A	\$59.95 No limit 512Kbit/s	\$59.95 No limit 512Kbit/s	\$99.95 50GB 1.5Mbit/s	✓	✓	\$99 6mths	✓
IntegrityNet ADSL	1300 884 337	www.integritynet.com.au	\$29.95* 200MB 256Kbit/s	\$59.95* 5GB 512Kbit/s	\$69.95† 10GB 512Kbit/s	\$99.95† 10GB 1.5Mbit/s	✓	✓	\$139 12mths	✓

Name	Phone	Online	Budget plan (under \$35)	Light plan (under \$60, at least 512Kbit/s, minimum 1GB data limit)	Family plan (under \$80, at least 512Kbit/s, minimum 10GB data limit)	High-speed plan (under \$100, at least 1.5Mbit/s, minimum 10GB data limit)	National	Spam filtering	Setup fee & contract length	Rapid transfer
Regular broadband ISPs (1.5Mbit/s or less)										
Internode Home ADSL	13 66 33	www.internode.on.net	\$29.95 500MB 256Kbit/s	\$39.95 8GB 512Kbit/s	\$69.95 40GB 512Kbit/s	\$59.95 10GB 1.5Mbit/s	✓	✓	\$129 6mths	✓
Internode SOHO ADSL	13 66 33	www.internode.on.net	N/A	\$59.95 10GB 512Kbit/s	\$69.95 20GB 512Kbit/s	\$79.95 10GB 1.5Mbit/s	✓	✓	\$129 6mths	✓
iPrimus Flexible Broadband	1300 854 848	www.iprimus.com.au	\$19.95† 500MB 256Kbit/s	\$29.95† 1GB 512Kbit/s	\$69.95† 20GB 1.5Mbit/s	\$59.95† 12GB 1.5Mbit/s	✓	\$2	\$119 12mths	✗
iSage Internet ADSL	1300 725 789	www.isage.aunz.net	\$29.95† 15GB 256Kbit/s	\$39.95† 25GB 512Kbit/s	\$69.95† 35GB 1.5Mbit/s	\$69.95† 35GB 1.5Mbit/s	✓	✓	\$119 1mth	✓
ispace ADSL	1300 769 615	www.ispace.net.au	\$29.95* 200MB 256Kbit/s	\$49.95 5GB 512Kbit/s	\$79.95 35GB 512Kbit/s	\$89.95 15GB 1.5Mbit/s	✓	✓	\$120 6mths	✓
Jumba Broadband	1300 855 554	www.jumba.com.au	N/A	\$45.95* 20GB 512Kbit/s	\$55.95* 35GB 512Kbit/s	\$69.95* 20GB 1.5Mbit/s	✓	✓	\$139 6mths	✓
Lets Go ADSL	1300 556 114	www.lets.go.com.au	N/A	\$59.95 30GB 512Kbit/s	\$59.95 30GB 512Kbit/s	\$99.95 30GB 1.5Mbit/s	✓	✓	\$99 6mths	✓
Lucidity Communications ADSL	1300 768 146	www.lucidity.net.au	N/A	\$59.95† 25GB 512Kbit/s	\$79.95† 35GB 1.5Mbit/s	\$79.95† 35GB 1.5Mbit/s	✓	✓	\$120 1mth	✓
Matilda Internet DSL	1300 665 865	www.matilda.net.au	\$29.95* 200MB 256Kbit/s	\$49.95* 1GB 512Kbit/s	\$59.95 10GB 512Kbit/s	\$89.95 10GB 1.5Mbit/s	✓	✓	\$110 1mth	✓
Midcoast Internet	1300 134 638	www.midcoast.com.au	\$28.50* 200MB^ 256Kbit/s	N/A	\$71.50* 10GB^ 512Kbit/s	\$98* 10GB^ 1.5Mbit/s	✓	✓	\$130 6mths	✓
Mydoor.com.au ADSL	1300 736 783	www.mydoor.com.au	\$34.95 500MB 256Kbit/s	\$44.95 1.5GB 512Kbit/s	\$79.95 30GB 512Kbit/s	\$89.95 15GB 1.5Mbit/s	✓	✓	\$110 6mths	✓
NCD ADSL	1300 768 433	www.ncd.net.au	\$29.95* 1GB 256Kbit/s	\$39.95* 2GB 512Kbit/s	\$74.95 35GB 1.5Mbit/s	\$69.95* 15GB 1.5Mbit/s	✓	✗	\$125 6mths	✓
Neighbourhood Cable	1300 366 248	www.ncable.net.au	\$27.95* 200MB 256Kbit/s	N/A	\$69.95 10GB 512Kbit/s	\$99.95 10GB 1.5Mbit/s	✓	✓	\$99 12mths	✓
Netbay Xtreme DSL	1300 733 215	www.netbay.com.au	\$29.95* 500MB 256Kbit/s	\$39.95* 1GB 512Kbit/s	\$49.95* 10GB 512Kbit/s	\$69.95* 10GB 1.5Mbit/s	✓	✓	\$99 12mths	✓
Netspace Home ADSL	13 14 56	www.netspace.net.au	\$29.95* 300MB 256Kbit/s	\$39.95 1GB+ 512Kbit/s	\$59.95 25GB+ 512Kbit/s	\$79.95 20GB+ 1.5Mbit/s	✓	✓	\$109 6mths	✓
Netspace SOHO ADSL	13 14 56	www.netspace.net.au	N/A	\$59.95 15GB 512Kbit/s	\$59.95 15GB 512Kbit/s	\$99.95 20GB 1.5Mbit/s	✓	✓	\$109 6mths	✓
North Queensland Telecom ADSL	1300 664 178	www.nqtelecom.com.au	N/A	\$59.95 25GB 512Kbit/s	\$59.95 25GB 512Kbit/s	\$89.95 35GB 1.5Mbit/s	✓	✓	\$90 1mth	✓
Optraweb ADSL / VOIP	1300 730 720	www.optraweb.com.au	N/A	\$48† 10GB 512Kbit/s	\$55† 30GB 512Kbit/s	\$88† 10GB 1.5Mbit/s	✓	✓	\$119 6mths	✓
OzEmail broadband1	13 35 93	www.ozemail.com.au	\$29.95† 600MB 512Kbit/s	\$39.95† 4GB+ 512Kbit/s	\$69.95† 20GB+ 1.5Mbit/s	\$49.95† 10GB+ 1.5Mbit/s	✓	✓	\$119 6mths	✓
OzForces Residential ADSL	1300 134 081	www.ozforces.com	\$24.95* 200MB 256Kbit/s	N/A	\$68.95 No limit 512Kbit/s	\$89.95 No limit 1.5Mbit/s	✓	✓	\$119 6mths	✓
OzISP ADSL	1300 654 653	www.ozisp.com.au	N/A	\$48.40 1.5GB 512Kbit/s	\$79.75 30GB 512Kbit/s	\$93.50 15GB 1.5Mbit/s	✓	\$2.75	\$132 6mths	✓
Ozziehost ADSL	1300 769 615	www.ozziehost.net.au	\$29.95* 200MB 256Kbit/s	\$59.95* 2GB 512Kbit/s	\$79.95* 20GB 512Kbit/s	N/A	✓	✓	\$120 6mths	✓
Pacific Internet DSL	13 36 35	www.pacific.net.au	\$29.95* 250MB 256Kbit/s	\$39.95 1GB 512Kbit/s	\$54.95 No limit 512Kbit/s	N/A	✓	✓	\$99 6mths	✓
Primus AOL Standard	1800 265 777	www.primusonline.com.au	\$24.95* 300MB 256Kbit/s	\$49.95 2GB 512Kbit/s	\$69.95 12GB 512Kbit/s	N/A	✓	✗	\$149 3mths	✗
Qualmark Online	1300 138 558	www.qualmarkonline.com.au	N/A	\$53.50 5GB 512Kbit/s	\$69.95 15GB 512Kbit/s	\$89.95 10GB 1.5Mbit/s	✓	✗	\$129 6mths	✓
Quik Internet ADSL	1800 000 355	www.gc.quik.com.au	\$29.99* 200MB 256Kbit/s	\$54.99 5GB 512Kbit/s	\$74.99 No limit 512Kbit/s	\$89.99 10GB 1.5Mbit/s	✓	✓	\$120 6mths	✓
Rabbit Interne: ADSL	1800 501 106	http://rabbit.com.au	\$16.50†* 200MB 256Kbit/s	\$35.15†* 1GB 512Kbit/s	\$51.38†* 30GB 512Kbit/s	\$71.41†* 10GB 1.5Mbit/s	✓	✓	\$99 6mths	✓
Rapid Net ADSL	1300 724 677	www.rapidnet.com.au	\$29.95* 200MB 256Kbit/s	\$49.95 25GB 512Kbit/s	\$79.95 35GB 512Kbit/s	\$79.95 35GB 1.5Mbit/s	✓	✓	\$129 12mths	✓
REEDS.NET Internet Services	1300 734 445	www.reeds.net.au	\$29.95* 300MB 256Kbit/s	\$45 25GB 512Kbit/s	\$45 25GB 512Kbit/s	\$81.50 35GB 1.5Mbit/s	✓	✓	\$125 6mths	✓
Reset Residential xDSL	1300 662 670	www.reset.net.au	\$29.95* 500MB 256Kbit/s	\$49.95 25GB 512Kbit/s	\$49.95 25GB 512Kbit/s	\$89.95 35GB 1.5Mbit/s	✓	✓	\$99 12mths	✓
Schaelec Residential Grade DSL	1300 554 687	www.schaelec.com.au	\$24.95†* 500MB 256Kbit/s	\$37.95† 25GB 512Kbit/s	\$65.95† 35GB 1.5Mbit/s	\$65.95† 35GB 1.5Mbit/s	✓	✓	\$159 6mths	✓
Schaelec Business Grade DSL	1300 554 687	www.schaelec.com.au	N/A	\$54.95† 25GB 512Kbit/s	\$79.95† 35GB 1.5Mbit/s	\$79.95† 35GB 1.5Mbit/s	✓	✓	\$159 6mths	✓
Southern Phone National ADSL	13 14 64	http://southernphone.com.au	N/A	\$49.95† 25GB 512Kbit/s	\$49.95† 25GB 512Kbit/s	\$89.95† 35GB 1.5Mbit/s	✓	✓	\$99 12mths	✓
Spin Internet	1300 303 375	www.spin.net.au	\$19.99* 200MB 256Kbit/s	\$39.99* 1GB+ 512Kbit/s	\$79.99 No limit 512Kbit/s	\$69.99* 15GB+ 1.5Mbit/s	✓	✓	\$99 6mths	✓
TeeGee Internet ADSL	1300 731 132	www.teege.com.au	\$29.95* 15GB 256Kbit/s	\$39.95* 25GB 512Kbit/s	\$69.95* 35GB 1.5Mbit/s	\$69.95* 35GB 1.5Mbit/s	✓	✓	\$99 1mth	✓
telaustalia SME & Res	1300 783 528	www.telaustalia.com.au	N/A	\$49.95 25GB 512Kbit/s	\$79.95 35GB 512Kbit/s	\$79.95 35GB 1.5Mbit/s	✓	✗	\$120 6mths	✓
Telstra BigPond ADSL	13 12 82	www.bigpond.com	\$29.95* 200MB^ 256Kbit/s	N/A	\$69.95† 10GB^ 512Kbit/s	\$99.95† 10GB^ 1.5Mbit/s	✓	\$2.50	\$99 12mths	✓
TSN Broadband	13 14 86	http://inweb.tsn.cc	\$29.95 No limit 256Kbit/s	\$39.95 No limit 512Kbit/s	\$39.95 No limit 512Kbit/s	\$69.95 No limit 1.5Mbit/s	✓	✓	\$129 6mths	✓
Velocity Internet ADSL	1300 557 300	www.velocitynet.com.au	\$29.95* 300MB 256Kbit/s	\$49.50* 4GB 512Kbit/s	\$79.50* 50GB 512Kbit/s	\$89.50* 24GB 1.5Mbit/s	✓	✓	\$69 6mths	✓
VitalTel ADSL Broadband	1300 858 706	www.vitaltel.com.au	\$23.95* 200MB 256Kbit/s	\$48.95 10GB 512Kbit/s	\$48.95 10GB 512Kbit/s	\$68.95 10GB 1.5Mbit/s	✓	✓	\$139.95 6mths	✓
Web Ace ADSL	1800 202 012	www.webace.com.au	\$28.95* 250MB 256Kbit/s	\$39.95†* 1GB 512Kbit/s	\$56.95† 30GB 512Kbit/s	\$92.95† 20GB 1.5Mbit/s	✓	✓	\$119 6mths	✓
Webzone	1300 303 932	www.webzone.net.au	\$32.95 1GB 256Kbit/s	N/A	\$79.95 30GB 512Kbit/s	\$99.95 10GB 1.5Mbit/s	✓	✓	\$149 6mths	✓
WA Budget ADSL	1300 365 678	www.westnet.net.au	\$29.95 500MB 256Kbit/s	\$39.95 1GB 512Kbit/s	\$79.95 No limit 512Kbit/s	\$69.95 10GB+ 1.5Mbit/s	✓	\$4.16	\$99 12mths	✓
Westnet Home ADSL	13 19 60	http://westnet.com.au	\$19.95* 200MB 256Kbit/s	\$39.95 1GB 512Kbit/s	\$79.95 30GB+ 512Kbit/s	\$69.95 10GB+ 1.5Mbit/s	✓	\$0.83	\$99 6mths	✓
Wild Internet ADSL + Phone	1800 809 453	www.wildsl.com.au	\$31.95† 15GB 256Kbit/s	\$39.95† 25GB 512Kbit/s	\$59.95† No limit 512Kbit/s	\$69.95† 35GB 1.5Mbit/s	✓	✓	\$109 1mth	✓
Wild IT Budget DSL + Phone	1800 809 453	www.wildsl.com.au	\$28.95†* 5GB 256Kbit/s	\$34.95†* 10GB 512Kbit/s	\$64.95†* 20GB 1.5Mbit/s	\$64.95†* 20GB 1.5Mbit/s	✓	✓	\$99 1mth	✓
Yak Networks ADSL	1300 784 866	www.yak.com.au	N/A	\$54.95 25GB 512Kbit/s	\$54.95 25GB 512Kbit/s	\$87.95 35GB 1.5Mbit/s	✓	✓	\$119 1mth	✓
Yausie Net ADSL	1300 883 352	www.yausie.com.au	\$29.95* 1GB 256Kbit/s	\$36.95* 1GB 512Kbit/s	\$65.95† 35GB 1.5Mbit/s	\$65.95† 35GB 1.5Mbit/s	✓	✓	\$110 6mths	✓
ZCTS ADSL	1300 852 949	www.zcts.net	\$29.95* 500MB 256Kbit/s	\$44 25GB 512Kbit/s	\$73.50 35GB 1.5Mbit/s	\$73.50 35GB 1.5Mbit/s	✓	✓	\$110 1mth	✓

Key: * ISP charges excess usage fees when you exceed your download limit. † This price only available if bundled with long distance telephony from the ISP.
+ Additional download allowance available with this plan for use in off-peak periods. ^ ISP combines sent and received data when calculating usage.

Roll your own TV station

P2P meets TV

The times, they are a-changin'. Internet piracy of popular TV programs seems to be an unstoppable steamroller, reports *Tim Gaden*.

Thanks to rampant piracy, internet-powered TV is no longer Bill Gates' pipedream. High-definition rips of TV episodes are available online just hours after they go to air. People are now building software and electronics that make it simple to watch the latest shows.

TV and movie viewers have long been held hostage to a distribution system designed by media juggernauts to maximise their revenue. It has been a waiting game,

as shows and movies trickle down from cinemas to pay TV to video/DVD and finally to free-to-air TV.

Australians have often had to wait years to get popular TV shows after they've been run in the USA and UK — if they appear here at all.

Now, new hardware and software is giving fans the power to break free. Using the power of the internet, new "unofficial" distribution channels offer people the chance to watch the TV they want when they want.

Paul Cleghorn, one of the movers behind Tape It Off The Internet.com, thinks that the internet will change the way TV works forever.

"The TV networks have seen what happened to the movie and music businesses and don't want to have the battles those markets have created for themselves," he says.

Cleghorn foresees P2P will be the winner. Advertisers will become producers as the networks' stranglehold weakens:

"Remembering that TV and advertising are intrinsically linked, I think the biggest change we will see is TV-style content, long-form 20-episode series, produced and distributed online by advertisers. It'll be free and distributed to whatever device you like, using whatever download technology of the day is most suitable."

In the meantime, the internet already offers you tools to get more control over your viewing.

Become your own broadcaster

www.getdemocracy.com

Democracy Player is an open source, cross-platform (Windows, Mac, Linux) video player and aggregator. It allows you to watch videos produced by other internet users (and to broadcast your own).

The best videos are ranked by www.videobomb.com, which, like the community-based web-ranking sites digg.com and del.icio.us, gives users a voice in judging what's hot.

User-produced media content will be a big thing in broadband soon. Simon Hackett, MD of leading Australian ISP Internode, says that it is only "just beginning to hit its straps", but believes that "the internet, as it finally becomes a real global broadband platform, will start to generate a platform where everyone can become a TV station or a video source — where content doesn't only live in large media storage citadels, but where it also makes it out to real people from their homes or offices."

The pirate's TV guide

www.myeisodes.com

MyEpisodes (www.myeisodes.com) offers a regularly updated and comprehensive listing of TV episodes showing in the USA on any given day. The interface allows you to track the episodes you have "acquired" and RSS feeds — personalised to your favourite shows — means your web browser can notify you when a new show goes to air.

Fans of British TV programs can get TV listings and emailed alerts when an episode is about to air from OnTheBox (www.onthebox.com).

But electronic program guides aren't all about piracy. For \$3/month, Australian TV viewers can get complete program listings from the IceTV Konfabulator/Dashboard widget (www.icetv.com.au). You can also get software which links in with popular digital TV recording packages to schedule automatic recording of TV programs (without having to manually type in timeslots).



"UNOFFICIAL" DISTRIBUTION CHANNELS LET PEOPLE WATCH THE TV THEY WANT

TOP 10 BITTORRENT SITES

1 mininova

www.mininova.org

Quick and comprehensive, mininova offers listings of movie, TV, anime, music and book torrents. RSS feeds keep you up to date with new listings.

2 TorrentSpy

www.torrentspy.com/default.asp

A directory and search engine for torrents covering TV, movie, music and adult content. Advertising and some content possibly NSFW.

3 The Pirate Bay

<http://thepiratebay.org>

Bills itself as the world's largest torrent tracker. Offers a search engine, browsable directory and Top 100 list. Available in 25 languages. Some European TV torrents. Again, saucy advertising.

4 TorrentreacTOR

www.torrentreacTOR.net

Another large site covering all the bases. Torrents found here can sometimes be poor quality — but site lists older torrents that can't be found elsewhere.

5 LegalTorrents

www.legaltorrents.com/index.htm

A collection of Creative Commons-licensed movies, music and written-word torrents. RSS feeds.

6 digitaldistractions

www2.digitaldistractions.org:8080/torrents.php

Lists UK TV shows, especially cooking, comedies and documentaries. If you like Jamie Oliver, *Monty Python* or the *Time Team* series, this site's for you. No RSS feeds.

7 VCDQuality

www.vcdquality.com/index.php

Offers mainly high-quality movie torrents. Torrents are sorted and linked to IMDb (the Internet Movie Database). Offers RSS feeds.

Anime	
Added	Name
06-31	[06] Bleach 77 [424416A] .ed
04-30	[04] [You Mom] School Rumble 2nd - 02 [0A20451] .ed
04-30	[04] [Ame-Ani] Ah My Goddess - Season 00 Episode - 01 [72369]
15-29	[05] [Shinsei-Setsu] The Law of Ueki 36 [080E2673] .ed
03-31	[03] Yu-Gi-Oh 1 - 724
03-15	[03] Macross Zero OVA (complete)
02-26	[02] Starman Beyond Season 1 Volume 1
01-26	[01] [ney] Soul Link - 02 [0A0C89C] .ed
02-21	[02] [04-Classic] Gundam: The New Century - 12 .ed
02-27	[02] Starman Beyond Season 1 Volume 2
Show all 61 items	

8 UKNova

<http://uknova.com>

A wider range of British TV shows than digitaldistractions, but not as much depth. It also offers radio torrents of popular BBC programs, but is particularly strong in game shows. Find *Nevermind The Buzzcocks* and *Have I Got News For You* here. No RSS.

9 Filesoup

www.filesoup.co.uk/forum

A forum-based BitTorrent community which requires registration but offers a more "interactive" experience for sharing music, movie and TV torrents (and more).

10 Demonoid

www.demonoid.com

A large torrent tracker that requires registration, reducing the amount of user "static" and low-quality torrents. Good search options. Offers HTTP and UDP options for its torrents.

Tape it off the internet

www.tapetofftheinternet.com

This site (www.tapetofftheinternet.com), still in the final stages of development, aims to be the iTunes Music Store of illegal TV torrents. Its interface will feature slick AJAX goodness, with every Web 2.0 bell and whistle — including tagging and IM features. Right now you can only read the FAQ and see some screenshots of the beta interface. It looks pretty, just like iTunes. Will it arrive just in time for the 6th-gen Video iPod and become the unofficial iTVS?

Owners of the UK-based site are not worried about the prosecution that caught other file-sharing services. Managing director Paul Cleghorn says, "We don't care where you download your TV from... BitTorrent, iTunes, direct from a TV show web site... it doesn't matter — we're not hosting any naughties, so I don't see a problem."



TV Torrent RSS

http://azureus.sourceforge.net/plugin_details.php?plugin=RSSImport

If you're willing to get your hands dirty, Torrent RSS offers a DIY approach to locating and enjoying the shows you want to watch. After installing the RSS Import plug-in for the cross-platform BitTorrent client Azureus (http://azureus.sourceforge.net/plugin_details.php?plugin=RSSImport), you can locate RSS feeds (or listings) of digital recordings of your favourite shows and download them automatically from the hard disks of thousands of other BitTorrent users. This file-sharing approach is smart too. It contains built-in protections to make sure you don't download the same episode twice. Although, you will need a broadband plan with a large quota to be able to enjoy this service (without worrying about maxing out your limit).

Placeshifting

coming soon

Watch the media content stored on your home computer from any other computer over the internet. Currently available in the USA, it requires subscription to a gateway service and device which can stream media content from home to any laptop with a net connection.

Sadly, upload constraints on Telstra-based ADSL connections in Australia mean placeshifting is unlikely to take off here on a broad scale any time soon (though if ADSL2+ ISPs like Internode and iiNet start pumping it up, it might). Intel is pushing the technology as part of their Viiv platform.

Sony offers a range of wireless-enabled TVs that connect through a base-station to your home Wi-Fi network, so that you can enjoy your digital content anywhere within range. Sony plans to offer software that will enable you to connect to your TV's base-station from anywhere on the internet.

Handheld devices and gaming consoles like the Xbox 360 can also take advantage of digital media sharing over networks.

Torrent toolbox

Torrents are user-produced and published files that act as pointers to digital recordings hosted on a large network of individual users' computers. Packaging these torrents in RSS feeds allows others to easily find the content they want with "broadcatching" programs designed to monitor the feeds (and auto-download your selections). It is like an internet-based version of the TiVo digital TV recording service.

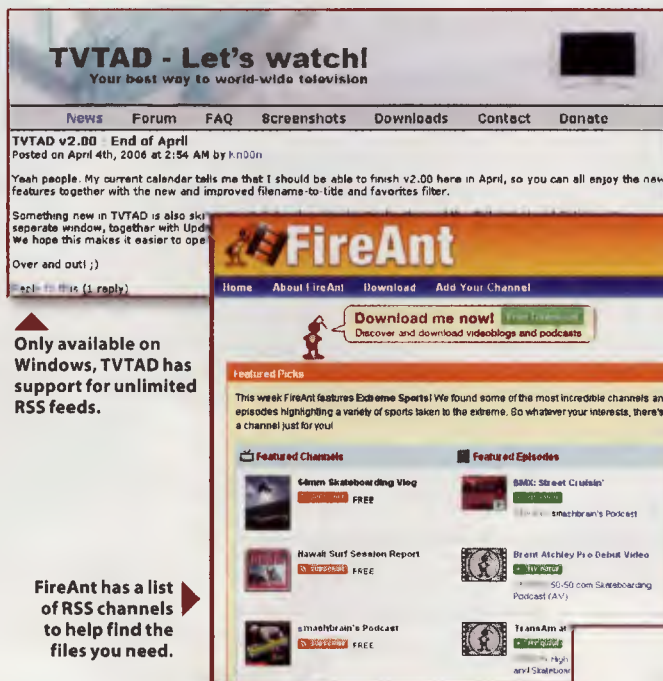
Not all the content of these RSS torrents is illegal. Some of the RSS readers below, like FireAnt, come pre-loaded with links to legitimate videoblogs like Rocketboom and VideoBomb.

RSS IMPORT PLUG-IN FOR AZUREUS

http://azureus.sourceforge.net/plugin_details.php?plugin=RSSImport
The most technically demanding of the options presented here, this plug-in reads an RSS feed and imports the torrent files into Azureus — according to the filters you set. You need to find and enter the URLs yourself (and the filters), although the plug-in keeps track of the torrents you download — so you don't duplicate. Like Azureus, the plug-in is cross-platform (Windows, Linux, Mac).

TVTAD

www.tvvad.com
TVTAD is an RSS-feed reader with support for unlimited feeds. It will automatically download newly released TV episodes that have been added to your favourites. It monitors the RSS feeds for you. TVTAD supports the official BitTorrent client, BitTornado, Azureus, iTorrent and others. Windows only.



Only available on Windows, TVTAD has support for unlimited RSS feeds.

FireAnt has a list of RSS channels to help find the files you need.

TMISTRESS

<http://darkar.free.fr/tvmistress>
TvMistress is an easy-to-use program that looks through RSS feeds for the content you specify in a series of filters; then it alerts you to matches. It is currently only available in Windows, although a Linux version is planned. Having recently gone open source, its future development remains unclear.

VIDEORA

www.videora.com
Works with Internet Explorer to subscribe, filter, match and download torrents from the RSS feeds you select. Videora has a

This mistress won't waste your time with unwanted files.

"season ticket" feature which will automatically download a whole season of your favourite show. A watch list lets you keep an eye on shows you want to know about but not automatically download. The full version costs US\$29.95.

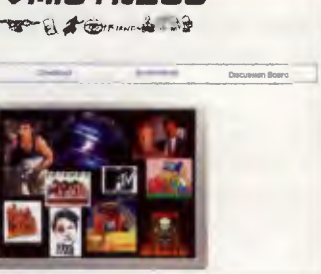
FIREANT

<http://fireant.tv>
Another broadcatching application

Automatically download your favourite TV shows.



TMISTRESS



for Windows and Mac. It surfs RSS feeds and supports BitTorrent, HTTP and streaming downloads. The FireAnt web site maintains a directory of RSS channels to help locate the media you want (as well as a built-in Yahoo! Video search). Portable video players like Creative's Zen Vision and Apple's iPod, are supported, giving you extra viewing options.

RECORDING TV ON YOUR PC

Buying a digital TV tuner card is the first step to sharing TV recordings with the world. You don't have to buy Windows Media Center to use as your PC's front-end; there are many alternatives, including SageTV for Windows and Linux, Beyond TV for Windows, EyeTV for Macs or MythTV for Linux.

Most tuner cards come with software that will record what you are watching, usually into the hefty MPEG-2 transport stream format. To share your recordings with other people (and make playback easier on a PC without DTV software), you'll want to recompress the files with a more space-efficient

codec such as DivX or XviD. For Mac, the open source program HandBrake is the tool of choice, while on Windows, Gordian Knot and MediaCoder will do the trick. The Democracy Player makes it easy for you to create a channel and start broadcasting your works of art!

X-RATED FOR EXPLICIT TECHNOLOGY

WD Raptor[®] 
10,000RPM SATA HARD DRIVE

EXTREME 10,000 RPM PERFORMANCE. EXCEPTIONAL 150 GB CAPACITY. EXTRAORDINARY RELIABILITY BACKED BY A 5-YEAR WARRANTY. WD RAPTOR X WITH WD TECHNOLOGY INSIDE. IT'S GOT NOTHING TO HIDE.



www.wdraptorx.com



FOR MORE INFORMATION ABOUT WESTERN DIGITAL'S PRODUCTS, PLEASE VISIT

[HTTP://WWW.WESTERNDIGITAL.COM/PRODUCTS](http://www.westerndigital.com/products)

AUTHORISED DISTRIBUTORS

ACHIEVA TECHNOLOGY
PHONE: (02) 9742 3288
[HTTP://WWW.ACHIEVA.COM.AU](http://www.achieva.com.au)

ESYS INTEGRATED
PHONE: (02) 9648 5220
[HTTP://WWW.ESYSGLOBAL.COM](http://www.esysglobal.com)

SYNNEX
PHONE: 1300 100 100
[HTTP://WWW.SYNNEX.COM.AU](http://www.synnex.com.au)

WESTAN
PHONE: (03) 9541 8888
[HTTP://WWW.WESTAN.COM.AU](http://www.westan.com.au)



Video killed by internet stars?

Pirated TV and movie downloads may be going gangbusters, but ISPs have high hopes for the new legal download services, reports *Jeanne-Vida Douglas*.

It's 11pm and Rory Bustos, a student from Ashfield in Sydney, has just settled down with his laptop to watch an episode of *Battlestar Galactica*. He knows he's breaking the law but — while Channel Ten is negotiating the purchase of the second series — illegal downloads are the only way he can keep up with his favourite show.

And he's not the only one. According to a survey conducted by web-based research company Envisional, Australian internet users account for 15.6 per cent of all pirated TV downloads. This places Australia with one of the highest per capita rates of online TV piracy in the world.

While downloading pirated movies and television remains illegal, with no legal download services to choose from, Bustos (and thousands of other Australians) have little alternative.

"I don't do it because it's pirated; I do it because it's the only way to watch my shows," Bustos says. "I'd prefer to watch it on TV."

Until now, most of the legal services available to US and European audiences have been closed to Australian residents.

The main exceptions — Apple's iTunes and Google Video — cater to a niche market, offering a range of Pixar animations, music videos and independent shorts, as well as documentaries and sporting programs. Google also launched an online movie store in January this year; however, at this stage it is not available in Australia.

As a result, mainstream movies and television programming continue to be — at least in relation to online delivery — particularly hard to access legally in this country.

However, all of this is about to change. By the end of 2006, at least four different movie download services offering DVD-quality feature-length films (and recent mainstream television programming) are set to hit the Australian market.

DIGITAL VIDEO RENTAL

Telstra's BigPond set the ball rolling in February this year,

launching Australia's first legal movie download web site. BigPond group managing director Justin Milne promised to quickly expand the launch collection (of 1,000 titles) to include 7,500 titles from big-name Hollywood studios and independent filmmakers alike.

However, digital movie buffs (with the average 256Kbit/s broadband connection) still have to plan well ahead. Weighing in at up to a gigabyte, the average feature-length film will take six to eight hours to download.

With the exception of music videos, which can be bought permanently, all movie files from BigPond will be protected with Microsoft Digital Rights Management 10 (and are designed to self-destruct at the conclusion of the designated rental period).

And don't expect to save any money — at \$5.95 for the overnight hire on a new release, BigPond Movies will be charging more or less the same rate as your

local video store (and that's before you factor in the cost of a Cable Extreme connection required to cut back on download times).

Despite the obvious challenge of slow download times, BigPond isn't the only company opting for PC-based downloads. By the close of 2006, Stephen Langsford, CEO of ASX-listed online DVD-rental service Quickflix, plans to launch a similar, PC-based movie rental service.

Having acquired its major competitor, HomeScreen, in December last year, Quickflix has a customer base of about 10,000 members who currently receive their DVDs via the post. Although details are scarce, at this stage Langsford is confident he will be able to offer an attractively priced premium service thanks to predictive recommendation technology — called Movie Selector — which bases any new recommendations on a customer's previous viewing habits.



I DON'T DO IT BECAUSE IT'S PIRATED; I DO IT BECAUSE IT'S THE ONLY WAY TO WATCH MY SHOWS. I'D PREFER TO WATCH IT ON TV

Your Way, Your Style.



Supercharge Your Notebook



Performance That Don't Cost an Arm & a Leg

Higher operating frequency and lower power consumption is what the new PQI DDR2-667 notebook SO-DIMM modules offer. Find out the true performance of your notebook by boosting your memory capacity and operate in dual channel configuration.



TURBO™
DDR2-667

PQI Turbo series are specifically engineered for overclocking. Capable of reaching extreme speeds and maintain excellent stability in any demanding stress tests; it is a true delight for enthusiasts.



POWERMEMORY™

PQI Power series have been thoroughly tested for full compatibility and offer fantastic performances for desktops and notebooks. It is the best choice for today's multi-tasking computing environment.

POWER QUOTIENT INTERNATIONAL CO., LTD.

14F, No. 16, Jian Ba Road, Chung Ho City, Taipei, Taiwan

TEL: +886-2-82265288

FAX: +886-2-82265268

WEB: www.pqi.com.tw

E-mail: sales@pqi.com.tw

Authority Distributor

JPM TECHNOLOGY PTY LTD

Suit 1004, 275 Alfred Street, North Sydney, Australia.

TEL: 61-2-9922-1686

FAX: 61-2-9922-1636

E-mail: jjlu@jpm.com.au



TO STB OR NOT TO STB

However, not everyone is tackling the broadband issue head-on.

Movie rental franchise Video Ezy and hotel-based pay-per-view movie service ReelTime Media are both coming to market with movie download services designed to side-step the broadband squeeze.

Rather than force 700MB files down home broadband connections, both services intend to deliver movies via set-top boxes which will come pre-loaded with hundreds of movies. As new movies are released, the files are downloaded to the units

during off-peak net periods — and are only offered to customers when they are ready for viewing.

Opting for a subscription model, Video Ezy will be launching set-top boxes via its five hundred video and DVD rental outlets later this year. According to Paul Uniacke, Video Ezy managing director, the company aims to integrate the new service with a predictive function based on its existing customer relationship management technology (which tracks the rental patterns of the company's 3.5 million customers).

"Right now we just don't have access to a technology capable of compressing a DVD and delivering it quickly — even via a high-speed internet connection," Uniacke says. "So, we're opting to deliver new movies via a drip feed, without the customer even noticing, and tell them when it's ready to be watched."

Although Video Ezy has yet to finalise its pricing structure, Uniacke hopes to offer the boxes free-of-charge, with a monthly subscription payment of \$39 - \$49.

Having developed a pay-per-view movie rental service for hotel

patrons, ReelTime Media managing director John Karantzis already has relationships with dozens of movie distributors and says customers will be able to choose from over 20,000 titles.

"On the inside, the set-top box is like a stripped-down Mac; it works as a personal video recorder, provides access to free-to-air digital television, surfs the web — and gives you access to ReelTime movies," he says.

At this stage, Karantzis is planning to sell the boxes at an up-front cost of \$500-\$800, then rent the movies on a pay-per-view basis. **ETC**

ONLINE VIDEO STORES COMPARED

Company	BigPond Movies	ReelTime Media	Video Ezy	Google	iTunes
Number of titles	1,000	20,000	100 - 500 (focusing on new releases)	Thousands (not specified)	7 short films; 1,000+ music videos
Movie studios	Sony Pictures Entertainment, Sony BMG, Becker, Warner Music, Universal Music, Dendy, Madman, Exero, Discovery International, Flickerfest, TWI, ABC, Granada Television.	Sony, MGM, Fox, Granada, Palace, United Artists, Screengems, IFM, Playboy, World Cinema, Hopscotch.	Five major studios, including MGM and Columbia.	CBS, NBA, Getty Images, Sony music videos, news and historical content from ITN and independent artists.	Pixar
Video codec	Windows Media Video 9	MPEG-4	H.264 and WM9	MPEG-4 for the PC, H.264 for iPod and PSP content.	H.264
Price per movie	\$1.95 for shorts, \$2.95 for TV, \$3.95 classic movies, \$5.95 new releases, \$3.95 music video purchases.	70c-\$2 for TV, \$3-\$4.50 for movie library, \$5.95-\$7.50 for new releases.	\$39-\$49 monthly subscription for unlimited access to movie library.	Various — prices set by content owners — a lot of free material.	\$3.39 — for a permanent copy of the movie.
Connection required	Any broadband connection from 256Kbit/s up.	Any broadband connection from 256Kbit/s up.	Preferably 512Kbit/s and up.	US-based broadband connection.	Any broadband connection from 256Kbit/s up.
DRM used	MS DRM 10	SecureMedia	Not yet specified.	Open — DRM set by content owners.	FairPlay
Availability	Browser-based access.	Via PC or set-top box.	Via set-top box, PCs and Mac via streaming.	Windows PCs only.	PC, iPod or Mac.
Ready now?	Launched 22 February 2006	Planned launch 1 July 2006	Late 2006	Launched to US in January 2006	Launched 2005



Catch the broadband wave.



Best modem brand
Best DSL Modem
Best small business
networking manufacturer
PC World Australia
Recommends
Award - RTA770



Market leading products for all of your communication needs.

Broadband



4-Port ADSL2+ Router



Combo ADSL2+ Modem/Router



Microfilter



Central Splitter

Wireless



11g 4-Port ADSL2+ Router



11g Cardbus Adaptor



11g PCI Adaptor



11g USB Adaptor

Other



56K External Modems



56K Internal Modems



VoIP Handsets



TV Tuners



1800 653 962



12 MONTH WARRANTY



www.dynalink.com.au





A choice IT setup **for a small business**

One of the biggest challenges for small business owners is how to set up a proper IT infrastructure. If you're charged with implementing the IT in a small business, consultant *Paul Schnackenburg* takes you through the basics.

If you only listen to vendors and marketers on how to best set up IT for a small business, you might come away with dozens of solutions and be none the wiser about the best path forward. The following commonsense guidelines cover the major steps a small business needs to take to ensure they get the IT fundamentals right.

One of the first things a small business owner needs to decide is whether to go with a wired or wireless network. Most will be wired, but if your office doesn't already have in-built data cabling you should consider wireless — it can be more convenient to set up and has the advantages of allowing its clients greater mobility. You can also add wireless elements to your wired network. If you choose to deploy a wireless network, you'll need to consider the following points:

Speed and coverage. Networking a few computers wirelessly is straightforward, but if you want to network a large number then serious planning is required. You must ensure you have enough wireless access points to give adequate coverage and enough channels (and always allow headroom for future growth).

Be aware of the mix of standards and speeds. Currently there are three wireless standards on the market: 802.11b, the oldest at 11Mbit/s nominal; 802.11a, at 54Mbit/s nominal (not compatible with 802.11b); and finally 802.11g (54Mbit/s), which is compatible with 11b (as it operates at the same frequency).

If you already have some wireless gear in your network, check what happens if you mix 11b and 11g devices: some WAPs (Wireless Access Points) revert back to 11b for all clients with a mixed setup. The other thing to remember about wireless is that speed varies widely and the actual "maximum" speed is rarely close to the nominal speed. About 30–40 Mbit/s is to be expected from 11a and 11g. Some vendors offer double the speed (108 Mbit/s) if you purchase all the gear from them. For web surfing and email it's adequate, but the difference is noticeable when plugging in a gigabit (1000 Mbit/s) cable.

Security. In a wired network, the boundary of your network stops at the wall; with wireless, the boundary can extend far into the street or neighbouring buildings. So ensure you enable the highest level of

security offered by the wireless gear, WPA2 preferably. See Mastering networking, part 2 (APC September 2005, page 112) for an in-depth look at wireless security. (Also consult part 7 — APC February, page 104 — for extending wireless coverage available at www.apcstart.com/smb/). If, like the majority, you choose wired, then a properly wired network will need the following components:

- A short patch cable from the Network Interface Card (NIC) in your computer to the wall connection point.

- The cable running inside the wall (or through a conduit) to the back of a patch panel in the wiring cabinet — don't lay these next to power cables or fluorescent lights.

- A short patch cable from the patch panel to the switch.

In a small network you could opt to run your own cables. There are several advantages to doing this, so visit the local electrical shop for all the gear — including a cable crimper. Be aware that a professional cable layer will have testing gear to verify the laid cables end-to-end. In a wired network, cable choice and installation quality is

important. You can choose between Category 5e (extended), Cat 6 or perhaps even Cat 7 — each category providing more bandwidth. Cat 5e can run Gigabit Ethernet but, as cable infrastructure usually lasts a lot longer than network gear, think ahead. In a few years you might want to run 10Gbit Ethernet (which requires Cat 6). Discuss cable quality with a cable contractor.

At the centre of the network, you need a device to connect all the computers together — traditionally the choice was either a hub or a switch. With today's pricing, always get a switch, which gives the full pipe to each node. By contrast, hubs share the data throughput.

When buying a switch, consider gigabit (1000Mbit/s) Ethernet if your budget allows. Only think about Fast Ethernet (100Mbit/s) if necessary. The combination of NICs and the switch controls the maximum speed. It's possible to have a dual-speed (100/1000Mbit/s) switch, with some older NICs only supporting 100Mbit/s and newer computers taking advantage of the full 1000Mbit/s. Also check all NICs: if most of them support full-duplex (ie. sending and receiving data simultaneously), make sure the switch does as well.

Microsoft Small Business Server can be managed from one integrated console.

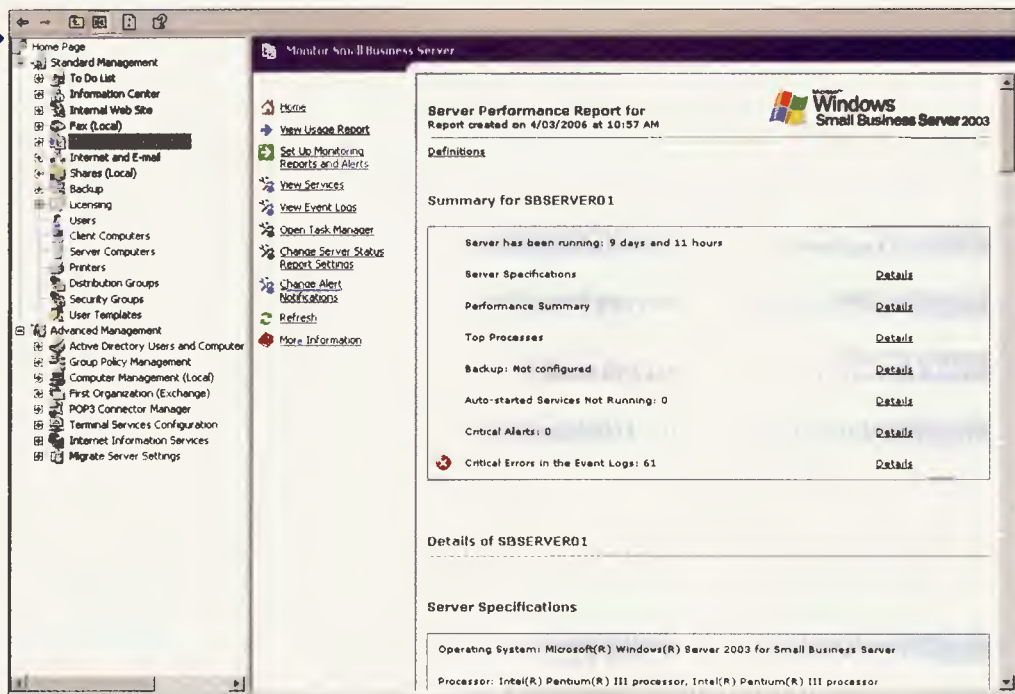
A network protocol is the language that computers use to "talk" with each other; nowadays there's only one choice: TCP/IP (Transmission Control Protocol/Internet Protocol). Every computer on the network needs to have a unique IP address. These can be set manually — but it's a laborious process prone to errors — so another building block in your infrastructure is DHCP (Dynamic Host Configuration Protocol). This service hands out IP addresses (from a predefined pool) to computers who ask for one when starting up. DHCP can either run on the server, which gives more control over how it works, or on the gateway router. Either way, make sure only one of these services is active on the network — as they don't know about each other and could hand out the same address to two different hosts.

Computers use IP addresses to talk to each other but we need "friendly" names to find our resources on networks, like "fileserver" instead of "172.16.18.42". The service that translates between names and numbers is DNS (Domain Name System). If the network only has a couple of computers you can do without this, as they will find each other by broadcasting their names. Otherwise, you'll need DNS running.

For a technical overview of putting together a small business network, see Mastering networking, part 1 (APC August 2005, page 102 — you can find this and all the Workshops mentioned here at www.apcstart.com/smb).

TO SERVER OR NOT TO SERVER

A fundamental networking choice faced by a small business is whether to have a workgroup network or a server-based network. In a workgroup,



ONE OF THE FIRST THINGS A SMALL BUSINESS OWNER NEEDS TO DECIDE IS WHETHER TO GO WITH A WIRED OR WIRELESS NETWORK

all computers are equal and can share resources (eg. files, printers, internet connection etc.) with all others. Security is difficult to maintain as there is no central authority — and this often leads to very low levels of safety measures. Backup is also more difficult, since important files can be stored on several different computers rather than in a central location. Finally, other services such as mail server, web server etc. must be hosted with an external provider rather than in-house. Notwithstanding these issues, a workgroup network can be suitable for a small business with no

more than five computers and light IT usage.

In a Windows server-based network, Active Directory (AD) takes central control. User accounts are specified — once on the server — and enable controlled access across all computers. Files are stored centrally and make it possible to centralise backup procedures as well. Be sure to set appropriate permissions on the shares and files on the server (see APC July 2005, page 98 or www.apcstart.com/smb). This server can also host email services, intranet, DHCP, DNS and so forth.

If you believe most computer magazines, there's a serious choice to be made between open source and proprietary software, ie. Linux vs Windows. The reality for small businesses today is that few even consider Linux — the main reason being ease of use and configuration.

This is changing however, and the open source movement is progressing from complex command-line configuration to a more holistic approach. Nevertheless, unless you know Linux yourself or can employ or contract someone to set it all up and keep it running, don't consider Linux

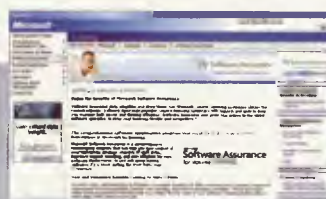
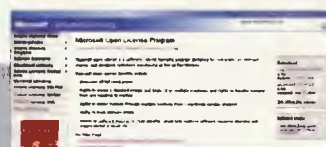
FURTHER INFORMATION

OVERVIEW OF MICROSOFT LICENSING IN AUSTRALIA

www.microsoft.com/australia/licensing/resources/options.aspx#table
www.microsoft.com/licensing/programs/open/default.aspx

THE BENEFITS OF SOFTWARE ASSURANCE
www.microsoft.com/australia/licensing/sa/benefits.aspx

MICROSOFT SMALL BUSINESS SERVER
www.microsoft.com/sbs



either on the server or the desktops. Also, be aware that studies show the initial purchase cost of software is a small portion of the overall cost of a PC over its three-to-five-year lifespan.

Another issue I find in many small businesses is mixed versions of Windows. Sure, you *can* run Windows 98, 98SE and ME together with Windows 2000 and Windows XP — but there will be additional hassles. This situation is often the result of how hardware is purchased. Rather than all computers being purchased at the same time in a hardware refresh cycle, they're often bought one at a time when the need arises. The main problem with this is the mix of hardware to support. If every computer has a different network card and graphics card or different specifications, it takes longer to troubleshoot problems, find updated drivers etc. Wherever possible, I recommend refreshing computers at the same time and buying identical machines — which can also prevent envy amongst staff.

The advice above regarding standardisation of hardware and Windows versions extends to other software as well. Don't run two different versions of Office just because that's what came with the computers. And don't even try running different office packages and translating between them — this can be fun for the home user with unlimited time on their hands but has no place in a business situation.

DO YOU HAVE A LICENCE FOR THAT?

This is a tricky area. The main issue to focus on here is the advantages and disadvantages of OEM licensing versus volume licensing.

When buying a new computer you can have it preinstalled with Windows XP and even Office, under OEM licences which are tied to the computer. But if you purchase a new computer in a few years, you can't use the installation media from the old computer and "transfer" the licence to the new PC. When selling the old

computer, the software that came with it should be enclosed in the sale.

This means that even though OEM licences are the cheapest way to acquire licensing, depending on how often PCs are refreshed — you may actually end up paying for Windows and Office a few times over. The solution to this problem is to acquire some sort of volume licensing from Microsoft. One option is the Open Business software licence purchase plan, where you have to purchase a minimum of five licences the first time to get on the program. This can be a mix of licences: two Windows XP Pro and three Office 2003, for instance.

This also gives you the option of purchasing Software Assurance (SA), a Microsoft scheme that gives you all kinds of maintenance and upgrade benefits. Purchasing SA counts as a licence, so three Windows XP Pro licences (with an SA licence each) counts as six licences and will get you on the program. Once in the program, licences can be purchased on an individual basis when needed. You track your licences on Microsoft's eOpen web site; installation media is purchased separately from licences.

In the Open Business program you can choose to have licences covered by SA (or not). With SA, you get product upgrades for free during the term of the licensing agreement (two years for Open Business) along with other benefits such as home-use rights, training vouchers and so on. Of course, you pay a premium for SA: Windows XP Pro under Open Business has a recommended retail price of \$331 (including GST); with SA, this goes up to \$514.

Timing is everything with SA; if you purchased Windows XP Pro with SA over the last year or so, XP's successor Windows Vista will be yours as soon as it's released. Without SA, you'll have to pay for the upgrade.

Contrast this with the boxed version of Windows XP Pro, at \$479.

The other option for smaller businesses is the Open Value software licence purchase plan. This comes with a fixed three-year term and SA is always a part of the deal. As you can imagine, these licences are more expensive but you have the option of spreading the payments over the three years with yearly payments. Windows XP Pro comes in at around \$597 RRP under this licensing.

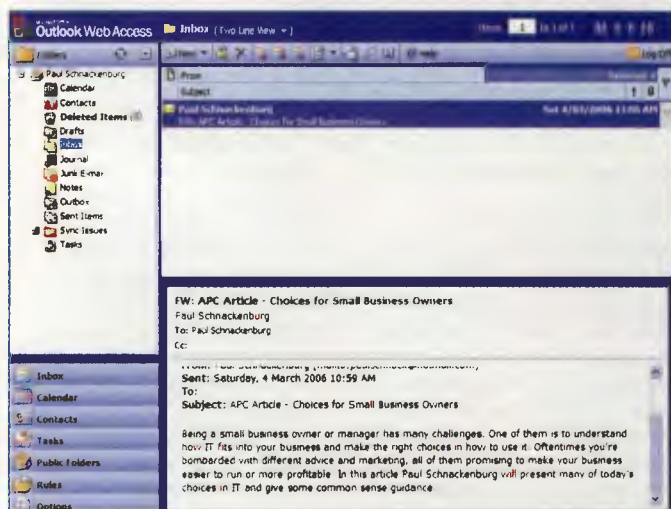
Further complicating this picture is the fact that the SA offered with Open Value provides more benefits than the SA under Open Business. Make sure you consult closely with your reseller and explore the different options available for licensing.

BLUE PILL OR RED PILL?

Choosing where to obtain computer hardware is a real minefield. Whatever you do, don't just go by price. The cheapest deal may well prove to be the more costly option in the long run. One characteristic of a business computer stands above all the rest when it comes to purchasing criteria: reliability. It's more important than CPU speed, RAM and hard drive space. Unfortunately, there is no easy way to gauge the reliability of a computer until you have owned it for a while — and even then you don't know for sure what sort of longevity it will provide.

Also, bear in mind that the general quality of electronic goods, including computers, is dwindling; "time to market" with products is prioritised over thorough quality testing.

Warranty plays a part but more important is the service orientation of the PC's vendor (and what response times it guarantees). On the one hand, there are big players such as Dell, HP, IBM/Lenovo and Acer, who can support their systems with networks of PC technicians. On the other hand



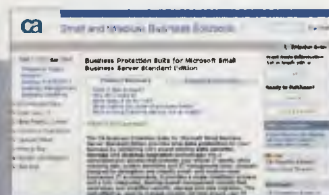
Outlook Web Access looks like Outlook and feels like Outlook, but all you need is a browser.



REGISTERING YOUR OWN INTERNET DOMAIN
www.melboumeit.com.au



SYMANTEC ANTIVIRUS WITH GROUPWARE PROTECTION
www.symantec.com.au/region/au_nz/product/sav/sav_gpwl/



CA BUSINESS PROTECTION SUITE FOR SBS
www.3a.com/smb/product.aspx?id=5436&culture=en-us



TREND MICRO CLIENT/SERVER MESSAGING SECURITY FOR SMB
www.trendmicro.com.au/smb/products/products.php?id=190

Remote Web Workplace, your all-in-one portal to the corporate network.

there is the local computer shop which is probably struggling to match the prices of the bigger players — but is often unmatched when it comes to personal and rapid service. However, the issue with the local computer shop is likely to be its own longevity; warranty issues and other problems become much harder to attend to when the computer shop has folded.

When purchasing, make sure you safeguard the business' ability to keep functioning fully by purchasing an extra system, setting it up with all the necessary applications and having it as a spare. If someone's PC is playing up, just plug the spare in and they can keep working. Consider storing some power supplies, hard drives, NICs and CPU fans as well for quick repair jobs.

Is your workforce mobile? With falling hardware prices, you can give laptops serious consideration as the main computers for your employees. By all means, give your staff a "real" keyboard and mouse in the office (and maybe even a larger monitor). But the ability to work anywhere can give your workforce an extra incentive to stay with you.

Backup hardware is another critical issue for a small business. Don't even think about trying to skip here; business data has to be backed up daily. Firstly, you need to backup to protect against hard drive or system failure. Secondly, make sure it's stored off site in case of theft or fire.

Traditionally, tape backup has been king of the hill with relatively fast backup times and cheap per-gigabyte media costs. Specific choices include DLT 4 (160GB per tape), DDS4 (20GB per tape) and DAT72 (72GB per tape). Today however, there are many valid alternatives to tape, such as DVD-RW

IS YOUR WORKFORCE MOBILE? WITH FALLING HARDWARE PRICES, YOU CAN GIVE LAPTOPS SERIOUS CONSIDERATION

and external USB or FireWire hard drives. The latter are gaining in popularity due to high capacity (500GB+), speed and versatility. Ensure the backup procedure is totally automatic — the maximum human involvement should be changing media and keeping an eye on the backup reports. If any more effort is required it will be forgotten or postponed (and probably at the worst possible time).

IT'S A WINDOWS WORLD

If you've decided to go down the Windows server route and your business is ready for its first server,

the choice is between Windows Server 2003 (standard) and Windows Small Business Server 2003 (standard or premium). For a business with less than 75 computers, SBS is the way to go. It bundles several essential products: Exchange 2003 with Outlook 2003 for email, calendaring etc., SharePoint for web-based intranet and Shared Fax services for network-based faxing. The premium edition adds SQL Server 2000 as the database, FrontPage 2003 for web development and ISA Server 2004 as a firewall. Considering the price of separate licences for these products, SBS is by far the better deal. It's also an

integrated package with several unique management tools.

INTERNET

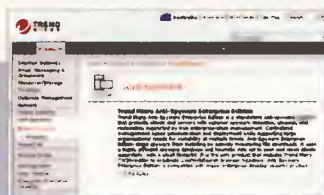
Your method of connecting to the internet is often dictated by the available technologies in your particular area. Broadband via ADSL is probably the easiest and most cost-effective; in some rural areas however, wireless broadband or satellite might be the only option. It's worth investigating plans from several different ISPs (see APC's monthly broadband directory on page 84).

Look for a business-oriented plan; the last thing you need is two weeks



McAfee Active Virus Defense SMB Edition

www.mcafee.com/au/products/mcafee/smb/antivirus/active_virus_defense_smb.htm



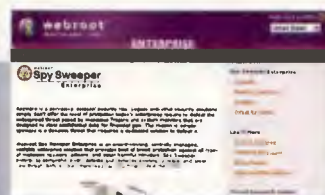
Trend Micro Anti-Spyware Enterprise Edition

<http://www.trend.net.au/enterprise/products/groups.php?prodgroup=15&family=42>



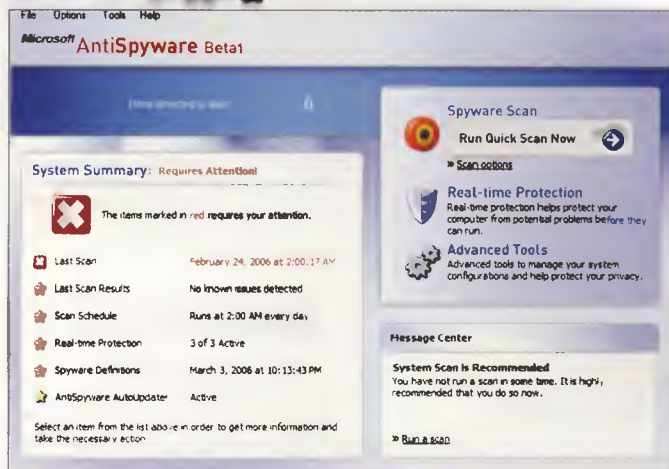
Sunbelt Software CounterSpy Enterprise

www.sunbeltsoftware.com/CounterSpyEnterprise.cfm



Webroot Spy Sweeper Enterprise

www.webroot.com/enterprise/products/



Windows Defender stands ready to defend your computers against useless software.

of snail-paced internet because an "unlimited" plan didn't take into account all your business downloads.

Where the internet comes into the business also needs consideration — a good firewall is needed between you and the bad guys on the net. Depending on the size of the network, a broadband router / ADSL modem / firewall hardware device could be used. Some of these feature a good firewall that will give adequate protection if configured correctly.

Another option could be a dedicated PC, perhaps running Linux, solely providing the firewall service. If you have opted for a server-based network with Microsoft SBS, look at the premium version as it brings ISA Server 2004 to the table. With this firewall, you can control in detail which sites are available and, more importantly, track individual usage. Weekly or monthly reports are easily defined, giving you an in-depth look at overall internet usage patterns. Finally, ISA also caches visited sites for all users, lowering overall downloads and providing a faster internet

experience. Linux can also be configured as a caching proxy server (see APC February 2005, page 94 or www.apcstart.com/smb).

Connecting the corporate network to the internet brings with it numerous benefits. It also raises a number of new problems such as lost productivity due to surfing of non-work-related web sites or legal issues due to improper use of email.

Even small businesses should have an acceptable use policy in place, to be read and signed by every employee. Use it to specify how the internet can and can't be used during work hours, whether email can be used for personal emails etc. Also, cover issues such as the installation of software / games and what is acceptable usage of computers in break-time and after hours. Lastly, if some employees have laptops, decide what's OK when these are off premises and at home.

In addition to the policy outlined above, consider implementing technologies limiting what sites are available to your users. In general,

a third party application is needed to do this; the built-in tools in ISA Server, for instance, are limited.

There was a time when the network in the office was all that was needed. Nowadays remote connectivity and smaller branch offices present additional challenges. Virtual Private Networking (VPN) is a technology for creating an encrypted tunnel between two computers over an unsecured network such as the internet. Providing remote access for mobile workers and people working from home can be another boost to productivity. Setting up a Remote Access Server (RAS) for VPN clients is easy in Windows — and even easier in SBS. If it's just remote email (Outlook) connectivity that's needed, take a close look at Outlook over HTTP, as it allows remote connectivity to Exchange 2003 without having to first establish a VPN connection. Or, if your users don't have a laptop but can access the internet from other computers, show them Outlook Web Access (OWA). Finally, SBS 2003 offers the Remote Web Workplace, a fantastic web-based portal for remote access for your employees.

If there are remote branch offices that need to participate in the company network, VPN technology can be used to set up permanent connections, once again using the internet as the link. Choices here include using ISA as a server-based VPN router or letting your hardware routers do the work. A more in-depth look at Windows VPN technology is offered in APC September 2005, page 102.

LORD OF YOUR DOMAIN

Another simple step that will make your business appear more professional is to register your own domain, such as www.company.com.au. Put together a simple

informative web site — even if you're not running a business that can trade over the internet. Complete the polished look by making sure all employees have email addresses that match the domain. Hosting your own mail server and mail domain is preferred, but if this isn't possible make sure to at least host the domain with an ISP/email provider. The other benefit of having your own domain is if it's necessary to change ISP — as far as your customers are concerned, nothing changes.

Make sure all clients and the server(s) run antivirus software; stay away from consumer antivirus products, which don't offer central downloading of virus signatures for internal distribution, nor central control of settings. Most of all, they don't interface with email servers. If you're running your own mail server, make sure the antivirus product supports scanning of emails *before* they reach your clients. Several of the major antivirus vendors offer integrated small business packages that cover all these requirements. Choices in this area include Symantec AntiVirus with Groupware protection, CA Business Protection Suite for SBS, Trend Micro Client Server Messaging Security for SMB, McAfee Active Virus Defense SMB Edition and many others.

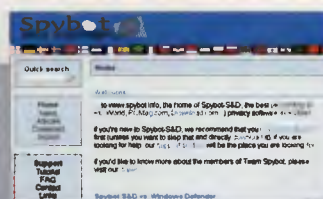
Another more recent threat is spyware, which is a much newer threat than viruses. A few business-class antispayware products are Sunbelt Software's CounterSpy, Trend Micro Anti-Spyware and Webroot Spy Sweeper. Some of the antivirus products mentioned above are also available bundled with antispayware in one integrated product. In the interim, Microsoft offers a free beta of Windows Defender; other free options are Ad-Aware and Spybot Search & Destroy. **ETDC**



MICROSOFT WINDOWS DEFENDER
www.microsoft.com/athome/security/spyware/software/default.msp



AD-AWARE
www.lavasoft.com



SPYBOT SEARCH & DESTROY
www.safer-networking.org



TUTORIAL ON DIFFERENT CABLE STANDARDS
www.lanshack.com/cat5e-tutorial.aspx

ZoneAlarm[®]

Internet Security Suite

Trusted By Over 35 Million People!*

- Wireless PC Protection
- Phishing and Spam Blocker
- Advanced Identity and Privacy Protection
- Integrated Anti-Spyware and Antivirus
- Triple Defense Firewall



**WE KNOW
INTERNET SECURITY
BACKWARDS!**

Available from all leading retailers

* ZoneAlarm & ZoneAlarm PRO combined users



...it's from



Coming clean about Ajax

Ajax is behind many of the revolutionary web applications which make up the so-called Web 2.0. Developer *Tim Buchalka* explains how it works.

You've probably heard all the hype about Web 2.0 and Ajax (and how it's bringing new life to web apps). Ajax is not a technology *per se*, but a mix of HTML (Xhtml actually), CSS, Javascript and XML, which takes advantage of powerful new features found in popular web browsers. Ajax makes web sites more interactive, giving them the look and feel of traditional desktop applications.

Web information architect Jesse James Garrett coined the term Ajax (Asynchronous Javascript and XML) in an article he wrote in early 2005. The principles behind Ajax can be traced back to Microsoft's Remote Scripting in 1998, although other references point to the ability of browsers to load web page content without requiring a full web page reload as far back as 1996/1997 in IE 2 and Netscape 4.

While some of the technologies that make up Ajax have been with us for many years, they only really went mainstream in 2005. Now, Ajax is behind an explosion in web apps that, in some cases, remove the need for desktop applications.

AjaxWrite (<http://ajaxwrite.com>) is one example. Open it via your browser and you have an alternative to Word that reads/writes Microsoft DOC files and runs on Mac, Linux or Windows. It was developed by Michael Robertson (of mp3.com and lindows.com — now linspire.com — fame).

Like Writely, another online Word clone (recently bought by Google), AjaxWrite offers a lot of the everyday functionality of MS Word in a very compact 400KB. Word processors are just the start. Robertson just released flowchart tool ajaxSketch, and online spreadsheets are already available elsewhere (<http://numsum.com>).

And of course, there's Google's Gmail (<http://gmail.com>), one of the earliest large-scale Ajax web apps. Like a lot of Google's products, it's still in beta — but is very stable.

HOW DOES AJAX WORK?

Before we answer that, let's recap how a traditional web application works.

When you start up a web application, generally you are presented with some options on screen (eg. a form to fill out). You fill out the form and click a "submit" button; all the information you entered is transmitted "in bulk" to the server, which processes the info and sends back a new web page for your browser to display. The end result is a functional, if not truly interactive, user experience. The user spends their time waiting till the server has sent back the entire page of information.

An Ajax web application, on the other hand, is completely different. Ajax technology allows your browser to communicate with the server asynchronously (meaning it can communicate with the server and do other things at the same time). Therefore, the user can continue to use the web application rather than waiting for a response.

The possibilities with this type of technology are almost limitless. In Gmail as you are composing a new email and are typing the name of the recipient, every time you type a letter of the name, Gmail automatically

retrieves a list of all names that match what you have typed so far and will display the selections in a window. If you see the name you want, just click it, or press enter over it (or continue to type — as Gmail allows you to do that as well).

Compare this to a regular web application. You probably had to enter the email address in full, or, if you were lucky, had a pull-down menu containing the names of all users in your address book and had to then laboriously go through the entire list to find the name you wanted.

What's happening in the Gmail example above is that as you type, the application is communicating with the server behind the scenes and asking for the server to return all names from your address book that match what you have typed. So, as you continue to type, the list of possible selections changes until eventually you are left with the exact person you wanted to send the email to (or a list small enough for you to easily see the actual person you wanted and at that point you could click or press enter and the

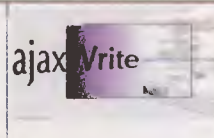
rest of the details will automatically be filled in for you).

This type of functionality is very common in desktop apps (but is very new to the web). Other benefits of using Ajax web applications include software updates. It's often a pain keeping up with the latest versions, patches, service packs and updates of a desktop application. With a web application, the latest version is always available to you — since it's already installed on the server, and run on any browser on any OS. Plus, web apps require only minimal computer resources (certainly less than equivalent desktop apps), since most of the processing often occurs on the server — not your machine. As such, your PC doesn't need to be running the latest and greatest hardware.

THE TECHNICAL DETAILS OF AJAX

An Ajax engine (often written in Javascript) adds an extra layer between the user and the server. The engine is loaded automatically when the web application is started and is responsible both for communicating

We have preloaded this Microsoft Word .doc file to show off some of the capabilities of ajaxWrite. You can edit one of your own .doc files by selecting "File: Open", or create a new document by selecting "File: New" (You'll be prompted to name your new file before it opens) Any document can then be saved as a .doc file to a local drive.



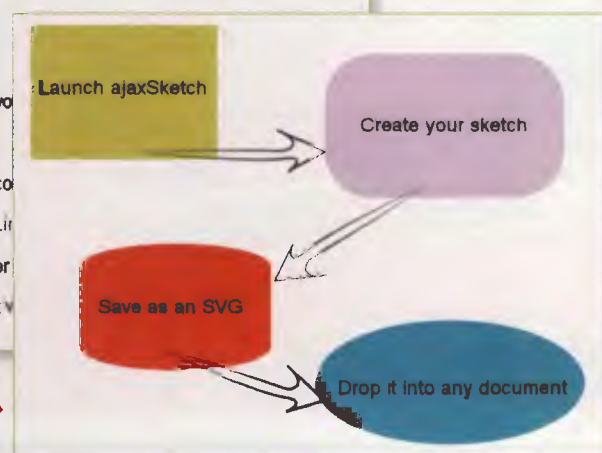
▲ AjaxWrite may only weigh in at 400KB, but it packs a lot of functionality.

Bulleted Lists

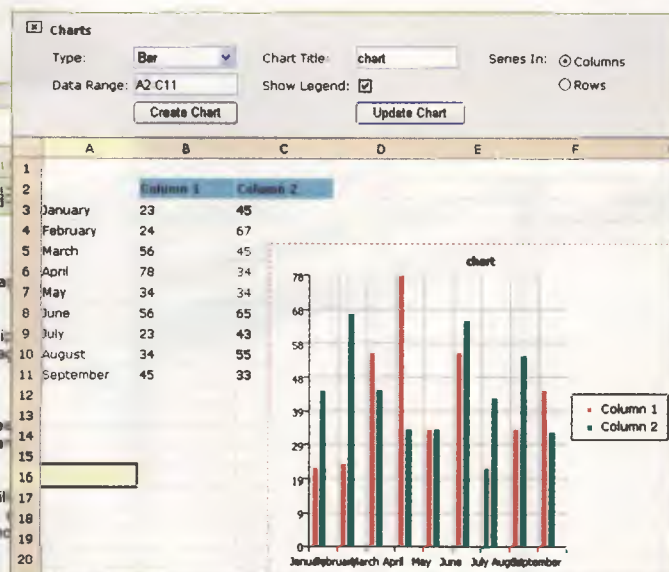
AjaxWrite offers many benefits:

- Loads in 6 seconds
- Look and feel of a traditional application so you
- Opens and edits Microsoft .doc files
- Access from anywhere, just go to ajaxWrite.com
- Use it with any operating system (Mac/Win/Linux)
- Small — under 400k so it's fast even on slower
- Never have to update — always find the latest v

Get with the flow: AjaxSketch offers a web-based alternative to diagram and drawing software.



And Writely so: Ajax enables online word processors to function.



Excel-ent: Num Sum gives you spreadsheeting online (for free).

with the server and for rendering the browser web page. This layer is what allows the user to work with the application asynchronously (no more hourglasses waiting for something to happen onscreen).

The actual underlying object that allows data to be exchanged asynchronously is called the XMLHttpRequest object. This object is built into recent versions of popular browsers.

Versions of some popular browsers that have this functionality are as follows:

- Microsoft Internet Explorer (5.0 and above)
- Apple Safari (1.2 and above)
- Opera (8.0 and above)
- Mozilla/Firefox/Netscape (7.1 and above)
- Konqueror 3.2 and above.

If you're running an older browser, now might be a good time to upgrade (as older versions of the browsers will not be able to run Ajax applications).

On our web site at www.apcstart.com/ajax, we've provided a simple example of Ajax in operation. Download the two files and run the example directly from your PC (no need to save the files to a web host).

Save both get.html and getdetails.html to the same directory on your hard drive. Then, open get.html from your browser (Click File > Open, navigate to the directory where you

saved the files, and open get.html). A (very) simple web page should be on screen. Enter a phone number in the mobile field and move focus from that field to another by pressing the tab key or clicking the mouse button outside the mobile field. Instantly you should see the first name and last name fields become populated.

Welcome to Ajax!

The code in the first file, get.html, appears below:

```
<html xmlns="http://www.w3.org/1999/xhtml" >
<head>
<title>Ajax Test</title>
<script language="javascript"
type="text/javascript">
function createRequestObject() {
var reqobj;
var browsername = navigator.
appName;
if(browsername == "Microsoft
Internet Explorer") {
reqobj = new
ActiveXObject("Microsoft.
XMLHTTP");
} else {
reqobj = new XMLHttpRequest();
}
return reqobj;
}
var http = createRequestObject();
function handleHttpResponse() {
var datareturned = new Array();
var response;
```

```
if(http.readyState == 4) {
response = http.responseText;
datareturned = response.split(',');
document.getElementById("firstna
me").value = datareturned[0];
document.getElementById("surna
me").value = datareturned[1];
}
}
function retrieveDetails() {
var mobilephone = document.
getElementById("mobile").value;
http.open("GET", "getdetails.
html?mobile=" +
escape(mobilephone), true);
http.onreadystatechange =
handleHttpResponse;
http.send(null);
}
</script>
</head>
<body>
<form action="post">
<p>
```

```
Mobile Phone Number:
<input type="text" size="11"
name="mobile" id="mobile" onbl
ur="retrieveDetails();" />
</p>
First Name:
<input type="text"
name="firstname" id="firstname"
/>
Surname:
<input type="text"
name="surname" id="surname" />
</form>
```

```
</body>
</html>
```

Note the onblur event handler (`onblur = "retrieveDetails();"`) in the mobile form field definition. This instructs the browser to call the `retrieveDetails` javascript function if the mobile field loses focus (by moving to another field or clicking the mouse button).

The `retrieveDetails` method itself, retrieves the contents of the `getdetails.html` file (which contains my first name and surname). It then updates the first name and surname fields on screen.

The `createRequestObject` function sets up the Ajax code to communicate with the server. It tests if you are using Microsoft Internet Explorer or another browser and creates the appropriate object to be used by other methods.

A real world example would not retrieve `getdetails.html`, but would instead invoke more complex code (perhaps looking up the mobile phone number and returning values from a database, instead of returning hard coded values as is the case here).

As you can see, there is nothing terribly complex about Ajax. If you just know a little bit of HTML and javascript, you can be up and going in next to no time.

We have really only touched the surface of Ajax and its capabilities, but I hope that I have at least given you some interest in exploring its possibilities further.



apc

exploding tech



We explode Samsung's latest wide-format 21in LCD monitor featuring its new S-PVA LCD panel technology.

- 1 Monitor bezel featuring integrated speakers and headphone jack.
- 2 Spacer layer.
- 3 Static-proof panel shield.
- 4 Samsung LCD panel featuring Super-Patterned Vertical Alignment LCD technology for high colour and contrast ratios and wide viewing angles.
- 5 Light Diffusion layer for regulated light output.
- 6 High-efficiency Cold Cathode fluorescent tubes for consistent panel backlighting.
- 7 Fiber optic layer for even light displacement.
- 8 Aluminum panel chassis.
- 9 LVDS board; interface between main board and LCD panel.
- 10 LVDS shield to remove EMC interference.
- 11 Monitor rear casing.
- 12 Inverter board/power-supply board; manages both light and power output.
- 13 Main board featuring signal processing, function control and data and audio/video interfaces; also features accelerator chip for 8ms response times.
- 14 Height adjustment monitor stand featuring auto-pivot function.
- 15 Swivel stand base.

Samsung SyncMaster 215TW





Project PowerToy

James Bannan shows how to unleash some awesome functionality and breathe new life into your XP machine with Microsoft's XP PowerToys.

JAMES BANNAN

James Bannan moved to Australia from England in 1982, but remains a stubborn Yorkshireman to the core. He graduated from Melbourne University with a BA/BCom in 1999 and went straight into IT. James worked as a support consultant at PricewaterhouseCoopers for over three years before moving to St Leonard's College as a systems manager. Outside of work, James is a competitive ballroom dancer.



SKILL LEVEL

Beginner

TIME TO COMPLETE

One hour

REQUIREMENTS

Computer running Windows XP; Windows XP PowerToys.

PowerToys were developed by Microsoft to enhance the functionality of the whole XP "experience". It beats me why Microsoft didn't bundle them into an update or service pack. Maybe it didn't want the support hassles (which is why they are completely unsupported).

Regardless of that, they're just too funky to pass up, so we thought we'd take a standard XP machine, trick it out with PowerToys and see what new options, projects and workflow tools become available.

Most of the PowerToys available require a standard Windows XP installation to function, but a couple need a bit extra, so you should be running a minimum service pack level of SP1 and .NET Framework version 1.1. The .NET Framework Redistributable packages are available for download from the Microsoft site and the security updates are available from Windows Update. .NET Framework 2.0 is not backwards-compatible with 1.1; applications which need 1.1 will not necessarily work on 2.0. But both versions will happily coexist on the same machine, so feel free to install both.

The first thing is to jump on Microsoft's web site and grab the PowerToys. Some of them require you to go through the online Windows validation process to make sure you're using a non-pirated installation. Just accept the ActiveX controls and step through the process — it's quite painless.

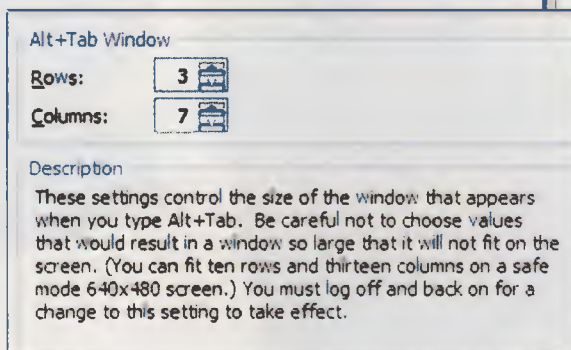
PROJECT 1 — UNLEASH THE DESKTOP

The first project we looked at was how to give the desktop an overhaul, and for this we used three PowerToys — Alt-Tab Replacement, Tweak UI and Virtual Desktop Manager.

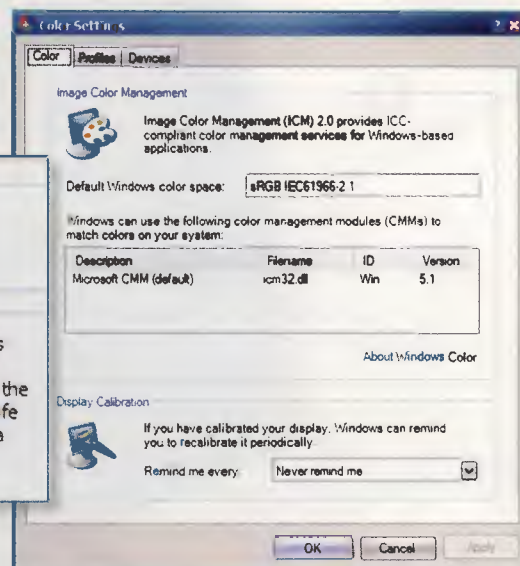
The Alt-Tab Replacement changes how your open applications are previewed when you press and hold Alt-Tab. Instead of giving you a line of icons with the program name underneath, it shows a full-rendered preview of each application window. This is extremely useful when you have multiple program windows of the same application, like several Word or Excel documents (or many instances of Windows Explorer or IE). Because it's rendered in real-time, it responds better with a half-decent graphics card under the hood, but there really isn't any computer out on the market now which couldn't use it properly.

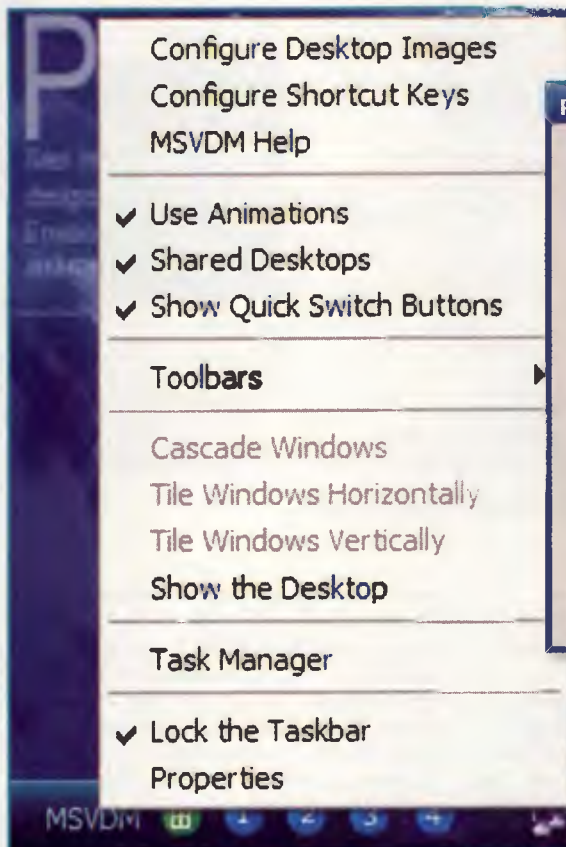
Tweak UI gives you access to Windows settings which aren't normally accessible. It doesn't aim at performance tuning, but rather in allowing you to change many of the default behaviours within Windows. For example, you can change the default location of system-defined folders like Favourites, Programs and Send To. These folders are often referenced by other applications using placeholders like %Favourites%, which means that changes made in Tweak UI are applied system-wide.

Control your colour management from one convenient location.



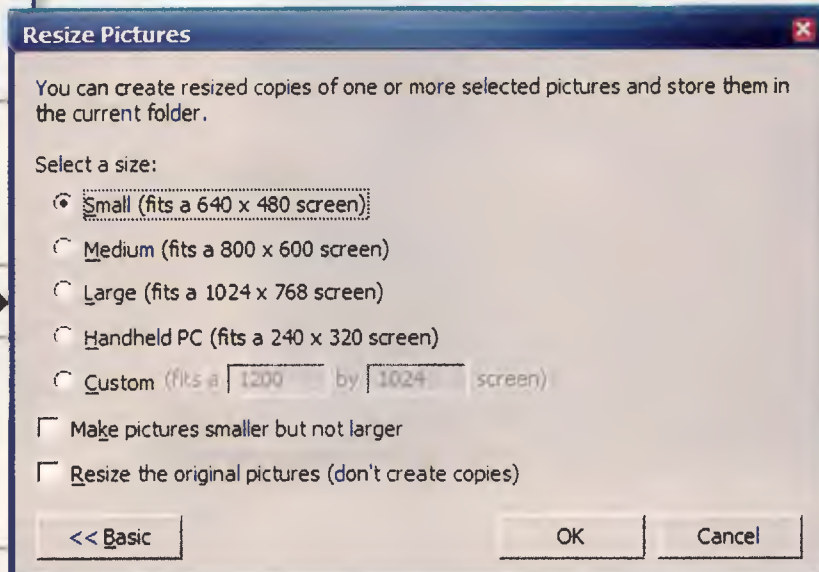
Lots of hidden settings to romp in!





MSVDM options — quick and easy to access.

The fastest resizer in the West.



Which desktop do you want today?



You can also do funky things like define the number of applications per line displayed by the Alt-Tab function and remove that annoying white arrow from shortcut icons (or create your own).

The Virtual Desktop Manager brings a particularly cool feature to the Windows desktop which has been present on Gnome and KDE-based Linux systems for some time — multiple desktops. This feature gives you four virtual desktops, all of which can house separate applications and have different background wallpapers. Once it's installed, enable it by right-clicking on the task bar; select Toolbars and then Desktop Manager. You then get five new icons in the task bar — a blue one for each virtual desktop and a green one which splits the screen into four quarters, displaying one desktop in each one. Right-clicking on any of these icons, or on the MSVDM text reveals the standard task bar options menu with the MSVDM options tacked onto the top. To set desktop backgrounds you need to use the Configure Desktop Images option — setting the desktop background any other way will not hold once you move away from that particular desktop. The Configure Shortcut Keys option lets you assign shortcuts to access each desktop and the preview screen. Windows Button + 1 through to 4 and "V" for the preview are pre-assigned. And finally, remaining

options let you toggle whether to use animation when switching screens, whether applications are shared between all desktops or restricted to individual ones and whether to disable the task bar icons for the virtual desktops (but not the preview icon). This last option is useful if you use the shortcut keys to switch desktops; plus, it gives you back a bit of extra task bar real estate. One thing to bear in mind — the Virtual Desktop Manager does chew up extra memory, and without a dedicated graphics card, the preview window and transitions can get a bit bumpy.

PROJECT 2 – GREAT IMAGERY

If you're interested in digital photography and web publishing, there are a few PowerToys which bring the two activities together, giving you greater image editing options through Windows Explorer, better support for digital image formats, centralised colour

control and creating HTML slideshows. For this project we used the Colour Control Panel Applet, HTML Slide Show Wizard, Image Resizer and the RAW Image Thumbnailer and Viewer.

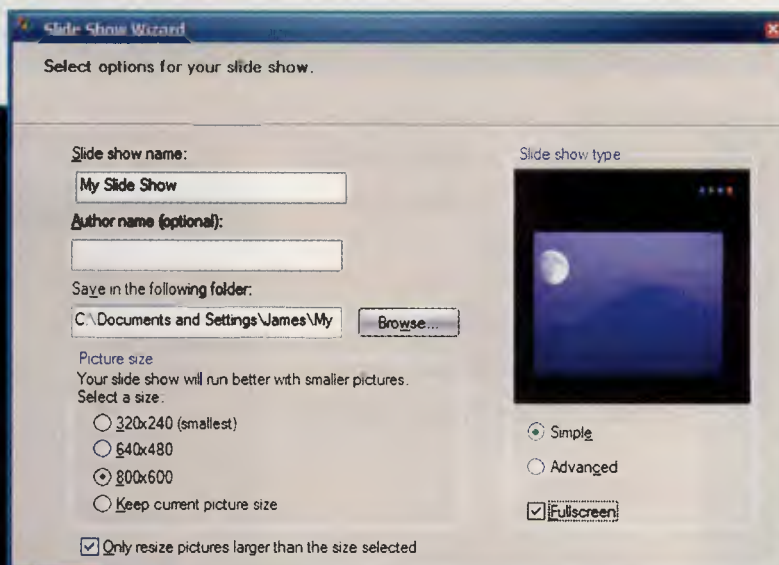
The Colour Control Panel Applet adds a Colour function to the Windows Control Panel. It's a particularly useful tool for designers and graphic artists as it allows you to centrally control the installation and configuration of ICC colour profiles and ICM 2.0 colour settings across the entire system. These profiles and settings are accessible by any installed application, printer or scanner (and anything else, really), but till now, each application or device had to be configured individually.

The RAW Image Thumbnailer and Viewer looks exactly the same as the standard Windows Picture and Fax Viewer, except that it supports the RAW digital image format, widely used on many Canon and Nikon digital cameras. It's a preferred format for many serious photographers over JPG as it contains full image information (and is a much better editing base from which to work). This PowerToy allows RAW images to be viewed as thumbnails within Windows Explorer and adds the capacity to perform basic editing, printing and to view and modify RAW metadata information.

The Image Resizer tool is an absolute treasure. It adds a Resize Pictures option to the right-click context menu within Windows Explorer. Click this option and you can resize the pictures (or selection of pictures) using some predefined size options — 640 x 480, 800 x 600, 1,024 x 768 and 240 x 320. All of these are a 4:3 ratio and are useful sizes for desktop



And the end result is slick and professional.



Quick and convenient slideshow creation.

screens (except 240 x 320 which is 3:4 for a handheld PC screen). Select OK and the tool runs through the process, creating new files based on the old file names. For example, resizing Picture01.jpg to 640 x 480 creates a file called Picture01 (Small).jpg. If you click on the Advanced tab you can also select a Custom Size. By default it selects 1,200 x 1,024, but you can enter in anything. Images resized using this method are renamed with (Custom) in the filename. You can also choose not to enlarge images (useful in a mass resize job) or to resize the original files (which means the resized pictures are the originals, not copies). It's such a great tool because it's not a complete application which you need to load, but simply a plug-in which makes a highly useful feature available right in the explorer shell.

And finally, the HTML Slide Show Wizard takes your colour-accurate, correctly-sized images and bundles them into a funky HTML slideshow format, ready for upload to your personal web site or to be zipped up and emailed out to friends and family. Launch the wizard from Start > All Programs > PowerToys for Windows XP. Hit Next on the first screen and you're prompted to add all the files and/or folders which are going to make up the slideshow. Make multiple selections and remove the ones you don't want; just drag and drop them into the correct order.

Hit Next and at the next screen there are a number of options to select. Type in an appropriate name for this slideshow and an author name if you like. By default, the Wizard selects to render each picture at 800 x 600 to optimise rendering speed. If you're sending the resulting slideshow out as complete files (which the recipients will access from their local machines), this isn't really an issue so just select Keep current picture size. By default, "Only resize pictures larger than the size selected" is

ticked and this option should be left alone. By default, all slideshows are saved to My Slide Shows in My Documents, in a folder based on the actual project name. There are two types of slideshow — Simple and Advanced — and they can both be rendered in full-screen. The Simple slideshow only has Play/Pause, Forward and Back buttons, whereas the Advanced slideshow also has Filmstrip and Previews options (which are basically the same as the Filmstrip and Thumbnail views within Windows Explorer). If you select the Fullscreen option, when you click within the rendered web page to watch the slideshow,

back when the second screen is rendered. To get around it completely, right-click on the IE desktop icon and select Properties. Go to Advanced and scroll down to Security. Tick Allow active content to run in files on My Computer and select OK. This will allow active content like Javascript to run in HTML files on your local computer. If you're sending the slideshow to someone also running XP SP2, they will need to do the same thing.

If you prefer to burn the whole thing to CD, you can create an autorun file so that the slideshow is launched as soon as the CD is inserted. Navigate to the folder which contains the default.htm file, and



THE VIRTUAL DESKTOP MANAGER BRINGS A PARTICULARLY COOL FEATURE TO WINDOWS — MULTIPLE DESKTOPS

it opens up a second IE screen in full-screen. To view the slideshow, you may either select View the slide show now after hitting Next, or simply navigate to the folder within My Documents and launch default.htm.

Something to bear in mind with this particular tool is that the enhanced LMZ (Local Machine Zone) security settings of Internet Explorer in XP Service Pack 2 mean that any web content viewed from a local computer is subject to tighter control than content viewed over the web. So, launching default.htm from a local machine running XP SP2 will invariably result in the page rendering (but one of those yellow IE security messages popping up, letting you know that local content has been blocked). You can click on the message to get around this, but it will come back each time. And, if you selected the Fullscreen option it will also pop

create a new Text document called autorun.inf. You may need to go into Tools and Folder Options within Windows Explorer — select View and untick Hide extensions for known file types. This makes file extensions visible within Explorer, otherwise you could end up with autorun.inf.txt (and that wouldn't work). Edit the autorun.inf; add the lines:

```
[autorun]
open=default.htm
```

Save, close and burn to CD, so that autorun.inf and default.htm are in the root of the CD. Bear in mind that recipients running SP2 will have to tick the IE security option Allow active content on CDs to run on My Computer (to avoid getting the security popup when the slideshow is launched). [APC](#)

On the menu tonight

This month, *Daniel Winter* demonstrates how you can add DVD-like motion menus to your MPEG-4 CDs and make near-perfect DVD backups.

DANIEL WINTER

Daniel Winter is a freelance developer with a background in multimedia and audiovisual production. He has been developing interactive database applications for a decade and producing music and video for 15 years. With award-winning online applications under his belt, Daniel has also been writing for APC since 1999.



SKILL LEVEL

Intermediate

TIME TO COMPLETE

Varies

REQUIREMENTS

MicroDVD freeware media player; CD/DVD burner.

INSIDE INFO

- MicroDVD Home
www.tiasoft.de/mdvdp/index.htm
- SubRip
<http://zuggy.wz.cz/>
- VirtualDub
www.virtualdub.org
- MicroDVD Player 1.2
www.downloading.sk/freesoftdownload/engine/download.php?id=35
<http://ftp.spisnet.sk/software/microdvd/mdvdp12.exe>
- SubRip 1.30
www.doom9.org/Soft21/Subtitles/SubRip_1.30_Beta.rar
- VirtualDub 1.6.11
<http://optusnet.dl.sourceforge.net/sourceforge/virtualdub/VirtualDub-1.6.11.zip>
- Chapter-X-tractor
http://files.dlrv-digest.com/software/player/ChapterXtractor_v0.962.zip

DVD ripping was once a mysterious art that involved a collection of obscure applications to decrypt, extract, demultiplex and re-encode MPEG-2 VOB files into AVI video (that can be played on any PC). Nowadays, the process has become greatly simplified as one-click DVD-ripping software is available in abundance. What DVD rippers don't offer, however, is the ability to extract the navigation, language, subtitles and chapter menus from the original DVD. Although this task is not as simple as ripping the video content from a DVD, it can be done relatively easily. In this Workshop, we'll walk through the process of recreating DVD menus that can be used to accompany DivX or XviD-encoded AVI files on conventional CD media.

INTRODUCING MICRODVD

MicroDVD 1.2 is a freeware media player that utilises special INI configuration files to emulate the functionality of conventional DVD playback using AVI files. To install MicroDVD, download it from www.tiasoft.de/mdvdp/index.htm and execute the mdvdp12.exe file, following the on-screen instructions.

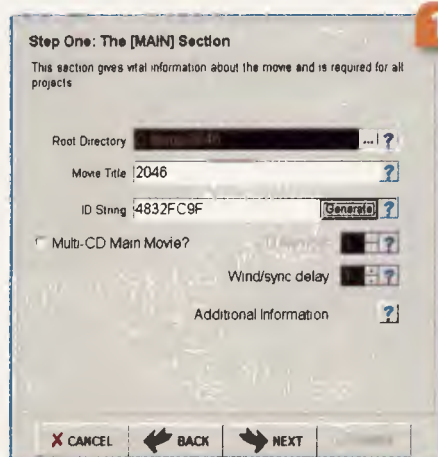
Note that while the MicroDVD player application is required to play back the specially configured CDs, the original AVI files are left untouched. This means the backed-up movies can still be played on PCs that don't have MicroDVD installed — only the extra DVD-like functions will be missing. For this Workshop, it's assumed that you know how to rip a DVD and have already done so at least once. To completely duplicate all the menus, however,

the original DVD will still be required. Configuring a MicroDVD disc simply involves the construction of a standard INI text file, which means you can make MicroDVD discs using Notepad if need be. To make things easier, though, MicroDVD comes with an INI Editor application that includes a Wizard for step-by-step configuration.

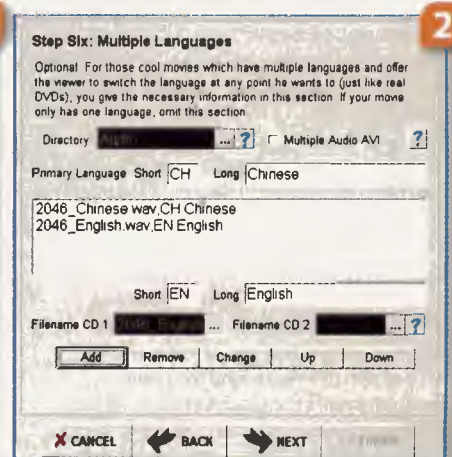
PREPARING CD CONTENT

Before building a MicroDVD project that can be burned onto a CD, there are a few things that need to be prepared in advance. Most importantly, the DivX or XviD AVI file is necessary, and it will need to be under 700MB or split into multiple files of this size (unless you plan to burn to DVD media instead). If the ripped movie has separate subtitle files (ie. the subtitles haven't been rendered into the video image), these will need to be grouped into a subtitles subdirectory with the AVI file. SubRip is an easy-to-use application designed specifically for ripping subtitles and it supports optical character recognition (OCR) as well. Using the OCR feature will take much longer to rip subtitles, as it involves a certain amount of user interaction, but the resulting file(s) will be significantly smaller. As with subtitles, if you intend to utilise multiple sound tracks, they will need to be ripped to separate audio files. Alternative audio tracks can be encoded as WAV, MP3, OGG or any other codec you choose.

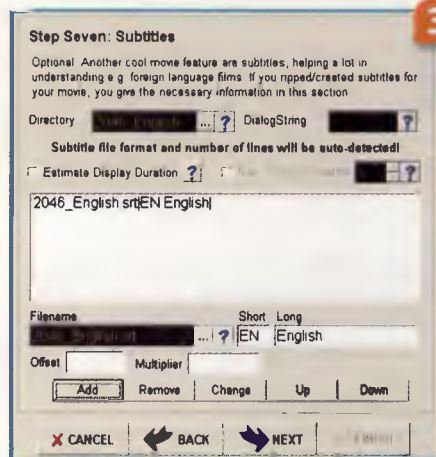
When it comes time to create the navigation menu, a screenshot for each menu page will be required. Most DVD playback software (for example, PowerDVD, Zoom Player etc.) supports frame capture to a bitmap or the Windows clipboard



The first step in creating a MicroDVD INI file is to locate the ripped AVI file and enter a title.



Browse to the subdirectory containing the audio tracks and add them using the wizard.



Browse for the subtitles files and provide full and abbreviated names for each.

and this is the best way to acquire stills from the original DVD menu. Once you have the backed-up movie, audio tracks, subtitles and menu images, you're ready to build a MicroDVD INI file.

CONFIGURING MICRODVD

Once MicroDVD is installed, fire up the INI Editor and select Wizard from the File menu. Click the Next button on the welcome screen and click the "..." button to select the folder where the existing AVI file is located. Enter the title of the movie and then click the Generate button to create a new ID for the disc.

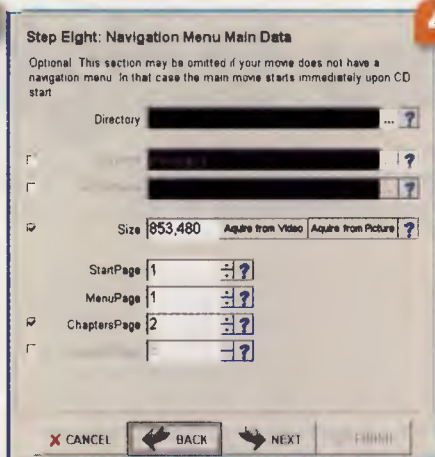
In step two of the INI File Wizard, browse for the AVI file and click the button which is labelled Load to Movie Window. If the movie has been ripped to multiple files, you'll need to nominate them in step one and then load each here. Be sure to click the buttons that acquire the number of frames for each file, as this helps MicroDVD keep track of playback that spans multiple files and/or disks. Once completed, click next to go to step four of the wizard. At this point, options are presented for including a chapter list, special features, multiple sound tracks, subtitles and a main navigation menu. Leave the first two options unchecked and select the rest before continuing to the next step.

ADDING ALTERNATE SOUND TRACKS

Assuming you have multiple audio files ready to go, step six of the wizard lets you select the folder where they are stored and add them to the project one at a time. If you're wondering how to extract multiple audio tracks from a DVD in the first place, look for a DVD audio ripper or, if all else fails, you can rip multiple AVI files with different sound tracks and extract the audio from each using VirtualDub.

When you are done adding alternate sound tracks, click Next.

With your menu image loaded, define its clickable areas and according actions.



Click the Acquire from Picture button to load the menu screenshot.

ADDING SUBTITLES

Step seven of the wizard is used to add subtitle files to the project. Note that it is only necessary to use the subtitles feature if you plan on making multiple subtitle streams available for viewing. Otherwise, you can simply name the subtitles file with the same filename as the AVI (with the exception of the file extension, of course) and it will automatically be detected and displayed.

With multiple languages and subtitles now configured, it's time to move on to the rather more interesting task of building DVD-style menus for your project.

RECONSTRUCTING MENUS

If the menu screenshots are stored in a subdirectory, select it using the "..." button next to the Directory input field. For now, disable the AVIName field and nominate an audio soundtrack to use for the

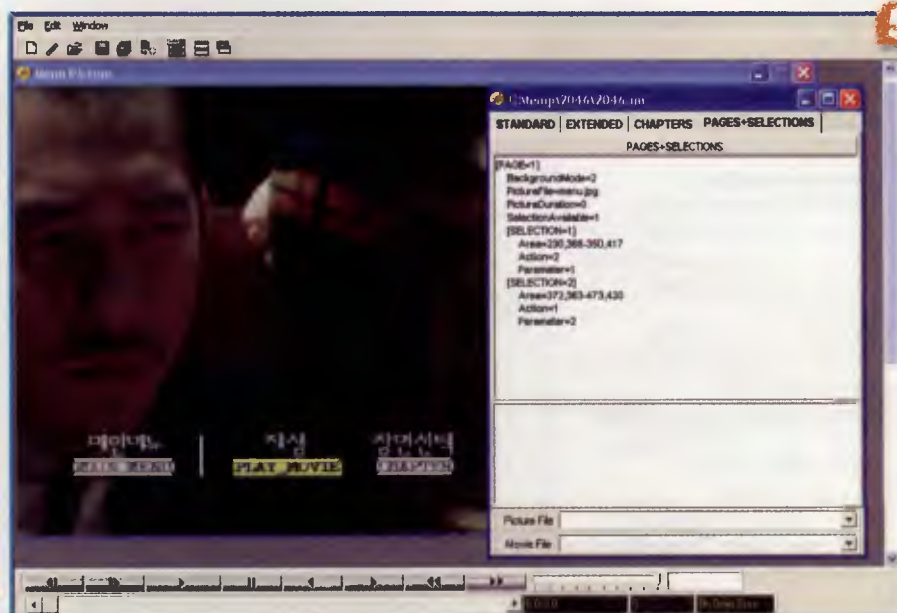
menu in the AudioName field. If you use audio, make sure it loops well — fading in and out the start and finish is usually the best way to do this. If you aren't using audio in the menu, deselect this field. Now, click the Acquire from Picture button. This will let you browse for the first menu image to load and automatically calculate the correct image size for the menu. In the list boxes below, both StartPage and MenuPage should be set to 1, while the ChaptersPage should be 2 (if you are using chapters, that is). Otherwise, disable the ChaptersPage checkbox along with the one for SpecialsPage. After clicking Next, the wizard will be complete and you should opt to save and load the completed INI file. Choose a suitable name and store it in the same folder as the AVI file with INI as the file extension.

Now, something like the following should appear in the MENU section of the INI Editor:

```
Directory=.
Size=853,480
StartPage=1
MenuPage=1
ChaptersPage=2
```

To create the menus and buttons, move to the Pages+Selections tab of the INI Editor. Here, the following needs to be inserted. Default entries can be added by right-clicking the pane and selecting Insert PAGE Section for Still Image Page.

```
[PAGE=1]
BackgroundMode=2
PictureFile=menu.jpg
PictureDuration=1
[SELECTION=1]
Area=230,388,380,417
Action=2
Parameter=1
[SELECTION=2]
Area=372,383,473,430
Action=1
Parameter=2
```



PictureDuration=0
SelectionAvailable=1

The most important thing here is the name of the menu background image (**PictureFile**) and the page number. To add the chapters menu, simply add the same five lines with **PAGE=2** and the appropriate image file listed as the **PictureFile** value. The next stage is to define the regions for each button as well as an action to perform when they are clicked. Firstly, enter the following to create a button or "selection" item under each page. The right-click menu also provides the option to Insert SELECTION Section.

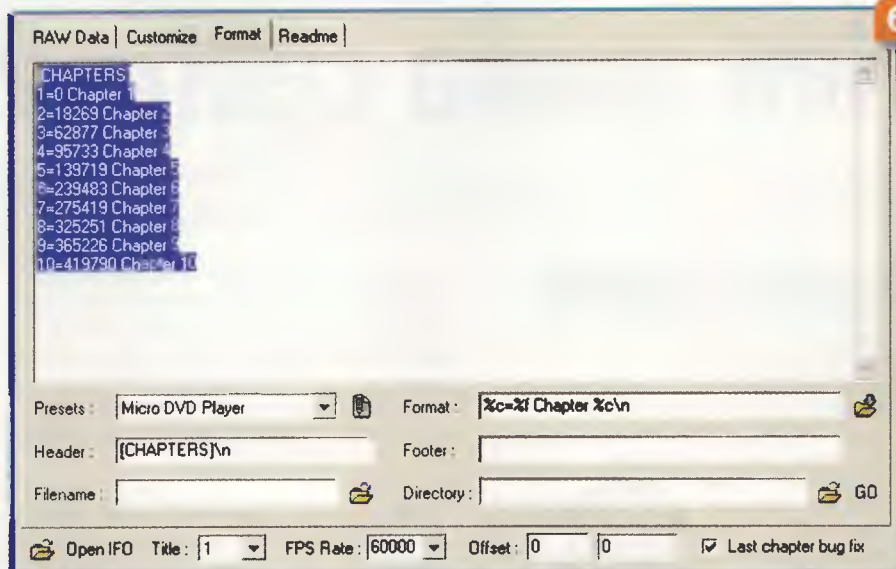
[SELECTION=1]
Area=
Action=2
Parameter=1

Now open the menu image by selecting Open picture file from the Edit menu. With the image loaded, the mouse can be used to select a region as a clickable area. With the first button selected, right-click next to the line **Area=** in the INI Editor and select Acquire area from picture. This will paste the coordinates for the selection into the editor. This should be repeated for each button in each menu page.

With all buttons configured for all menus, the last step is to specify an action for each when clicked. This is where the **Action** and **Parameter** values we have been using come in. The list of available actions are listed below.

1. Go to Page
2. Run Movie
3. Go to Chapter
4. Display Message (in pop-up box)
5. Run Special Feature (movie)
6. Change Language
7. Change Subtitles
8. Return to Movie

For all actions except 1 and 8, a parameter is also expected. In the case of 1 (Go to Page), for example, you would enter the page number to be navigated to when the button is clicked. Similarly, a chapter number is expected for action 3, but text can be supplied to action 4 if you want to display a pop-up message.



Chapter information can be pasted directly into the MicroDVD INI Editor.

Using these options, most DVD menus can be reconstructed in their entirety — you can even play introductory scenes using the **PictureDuration** and **ActionAtEnd** parameters. For instance, the following piece of code can be used to play a 20-second AVI as an introduction (such as a logo or legal disclaimer), prior to the commencement of the main menu.

[PAGE=1]
BackgroundMode=2
AVIName=intro.avi
SelectionAvailable=0
PictureDuration=20
ActionAtEnd=1
Parameter=2

IMPORTING CHAPTERS

Chapter markers are required to reconstruct a chapter menu from DVD, but a chapter menu isn't necessary in order to use chapters during playback. MicroDVD provides chapter navigation so long as chapters are defined in the INI file. We skipped the chapters section of the INI Editor wizard, because it is easier to perform this task manually using a third party utility called Chapter-X-tractor. The chapter information for a DVD is usually stored in the last IFO file on the disc, so open this file in Chapter-X-tractor and copy the generated text from the format tab of the main window. With the chapter list on the Windows clipboard, it can be pasted into the Chapters window of the main INI Editor window. At this stage the INI file is complete, so save it and drag it onto MicroDVD player to see the full MicroDVD in action.

MOTION MENUS

Motion menus are more complicated than still images, primarily because MicroDVD expects a single AVI file which is used for all menu pages. This means that if there are to be three separate menu pages, for instance, they need to be rendered together into a single AVI video file. Each "scene" can be allocated to a menu page using the **VideoRange** and **VideoLoop** parameters in the [PAGE] elements of the INI file.

VideoRange specifies the start and end frames for the menu loop and **VideoLoop** needs to be set to 1 to enable looping. The **BackgroundMode** also needs to be set to 1 so that MicroDVD knows that an AVI is expected. You can identify the start and end points of the loop using the INI Editor playback head, which will display the frame number when it is dragged to the correct loop point location.

100% Australian Web hosting
from less than \$10 per month

- No obligation FREE Trial Month
- Generous bandwidth allocations
- unlimited email addresses
- PHP, ASP, CGI, MYSQL, Webmail
- Rapid and knowledgeable support
- Over 6 years in operation

2 years GST inc

com.au \$39.90

1 year GST inc

.com \$14.90

1300 130 317

http://host.smartartist.com.au



New media centre PC, part 1

Like the idea of enjoying a media PC — but lack the funds to buy a new one?

Stephen Withers turns an older system into a media centre.

STEPHEN WITHERS

Stephen Withers has been writing for APC since its second issue. With a professional background in operations research and IT, he switched to full-time writing and editing in 1990. As much as he enjoys cutting code, he now has insufficient time for anything more complex than scripting. Stephen has been networking computers since the time when an Ethernet card cost more than a PC.



SKILL LEVEL

- Intermediate to advanced

TIME TO COMPLETE

- Four hours (plus disk formatting time)

REQUIREMENTS

- Components as listed; crosspoint, flathead and jeweller's crosspoint screwdrivers (may vary according to parts used).

A media centre PC is fundamentally a standard PC — with some specialist components that turn it into an entertainment system capable of handling video and music. We're going to convert a standard PC so, for this project, we've chosen a three-year-old PC with an Athlon XP 2000+ CPU and 512MB of RAM in a bog-standard configuration.

OVERVIEW

The absence of a DVD drive is the most immediate problem. At the time this system was purchased, DVD burners were still expensive. Now, good quality drives are available for under \$100 — well, under \$100 if you don't want a 16x dual-layer model. Still on storage, a 60GB disk drive is — believe it or not — still adequate for general use, but a lot more space will be needed for a digital media library — especially off-air recordings.

Replacing the original drive is one option, but as the tower case provides enough room we'll add a second one that could be reserved for media storage. While there are enough bays to retain the CD drive, we'll settle on a straight swap with the DVD burner.

What's a media PC without a TV tuner? While an analogue TV tuner would be cheaper, we've decided to go for a combination digital and analogue model to take advantage of digital's better quality (and wide-screen capability) while retaining access to any analogue-only community channels.

Our chosen device also includes FM radio, though this function is also available separately. Both TV and radio tuners are available in external or internal models. We would normally opt for internal devices to reduce clutter, but externals are useful if you don't have spare slots (or you're using a notebook), or if you want to use a tuner with more than one computer.

WHAT WE USED

- FSP Blue Storm 500 power supply.** Supplied by Anyware, www.anyware.com.au, (02) 9879 5788, \$159.95.
- LG Internal 16x SuperMulti DVD/CD Rewriter GSA-4167B.** Supplied by LG, www.lg.com.au, 1800 725 375, \$89.
- Maxtor MaXLine III 300M internal drive.** Supplied by Maxtor, www.maxtor.com.au, (02) 9369 3662, \$209.
- Pinnacle PCTV 310i analogue/digital TV tuner with FM radio.** Supplied by Lako Pacific, www.lakopacific.com, (03) 9455 7444, \$199.99.
- PowerColor 9550 video card.** Supplied by Australia IT, www.australiait.com.au, (03) 9560 3188, approx. \$95.
- Sunix 5.25in Multi-Function Bay.** Supplied by Anyware, \$109.95.
- Sunix Combo Card 1394/USB 2.0 PCI.** Supplied by Anyware, \$89.95.
- Thermaltake POLO735 Rev 2 Extreme 4 in 1 Cooler.** Supplied by Anyware, \$53.95.

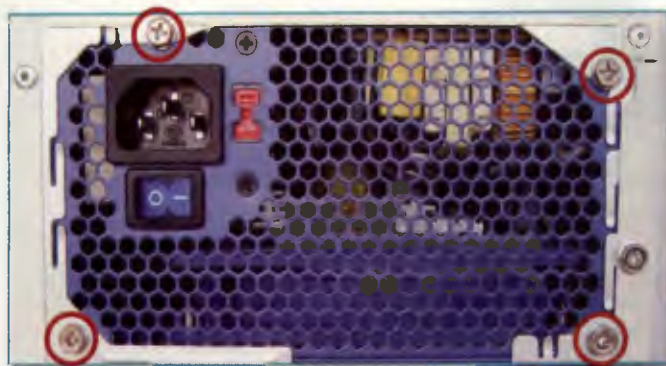
If you plan to use only the PC's monitor, or another device such as a projector with a VGA interface, your existing video card will probably suffice. Your card may already have a regular video output to connect to a TV, but unless it is fairly recent it'll probably need replacing if you want a DVI interface for a better-quality connection to your modern flat-panel set or monitor.

Modern video cards tend to run fairly hot. This usually means another fan — which means more noise — so, to help keep things quiet, look for a card with radiator-style fanless cooling.

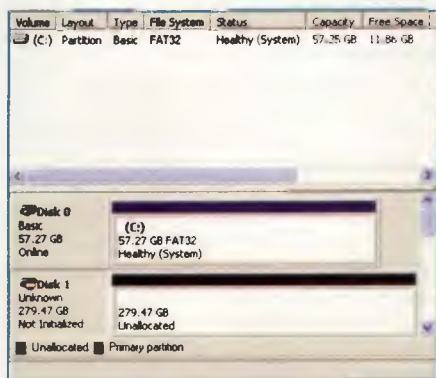
Moving into the realms of not-essential-but-nice-to-have, we want to add front-panel USB 2.0

Out with the old and in with the new. ➔





Four screws secure the power supply.



Computer Management sees the new drive, but it isn't partitioned or formatted yet. The new drive has been set up as one big partition and is ready for use.

Slide the DVD burner into the drive bay from the outside of the case.



Fit the hard disk from the rear of the bay, secure it with screws and then plug in the data and power cables. The design of the connectors used on the Blue Storm power supply makes them easier to unplug when necessary.



and FireWire connectors, along with a memory card reader. This would make it easier to connect digital still and video cameras, but as our PC only has USB 1.1, it means adding a combo interface card as well as the drive bay connector unit.

Like a lot of Athlons, this computer is pretty noisy — certainly too noisy for lounge-room use. We decided to quieten things down by replacing the CPU cooler — and the power supply — with low-noise models.

GETTING STARTED

Start the upgrade by replacing the power supply first. This isn't difficult, but due to the number of screws and connectors involved you need to be methodical. Cases and power supplies vary, so these instructions are very general.

Make careful notes of every connection from the power supply before you disconnect anything and use them to help you hook up the new one. The main risk is that you'll forget to make one of the connections.

Once you've disconnected all the PSU cables — remember to pull on the connectors, not the cables themselves — remove the screws holding it to the case and lift it out. You may have to slide it away from the rear of the case first.

Double-check that the new PSU is set to the correct mains voltage before proceeding.

We're using a FSP Blue Storm 500 power supply provided by Anyware. This model provides plenty of power connectors and runs relatively quietly.

Slot in the new PSU and secure it with the screws. Attach all the required connections (there will probably be some unused cables, eg. for additional disk drives) and recheck your work. You could use cable ties to keep everything tidy.

Depending on the case design, fitting extra or replacement drives is usually pretty easy. With a hard disk, begin by checking its jumper settings (usually illustrated on a sticker somewhere on the drive). If you're installing a second drive, set it to slave; if you're replacing a drive, set it to master. Slide the drive into the bay from inside the case — with the connectors pointing into the case and the drive's circuit board facing down — and secure it with two or four screws, depending on the size of the case. Be gentle, as you don't want to strip any threads. Finally, connect the power and data cables.

We suggest partitioning and formatting the drive at this stage. Temporarily removing the data cable to the CD drive seems to be the easiest way of allowing the new drive to become D: under Windows XP.

In the Start menu, right-click on My Computer and choose Manage. In the Computer Management window, click Disk Management and a wizard will walk you through the process. You do want to initialise Disk 1 (the first drive is Disk 0) and you probably don't want it to be a dynamic disk. When the wizard has finished, right-click on the map of Disk 0 (at the lower right of the window) and choose New Partition. Another wizard helps you with the partitioning process. Since it is going to be our media library, we want one big primary partition

called Library, using NTFS and assigned as drive D:. When formatting is finished, shut down the computer and continue with the remaining hardware installation. If you're not replacing the CD drive, remember to reattach its cable.

Remember that when you add a drive in this way, the drive letters of your removable storage devices move up, so you might need to adjust the settings of any applications that use such drives. For example, if you've been backing up a program's data files to a USB flash drive as E:, in future you'll refer to it as F:.

Installing a DVD burner is similar to installing a hard drive, including the master/slave setting. The main difference is that you slide it into the drive bay from the outside, having first removed either the old drive or the blanking plate.

If you're going to fit something to the second drive bay — such as a Sunix 5.25in Multi-Function Bay — you'll find it's easier to remove the blanking panel while the optical drive is out of the case. Also, think about which device should go in which bay: you don't want the DVD tray to interfere with cables connected to the front panel sockets. Generally speaking, we prefer the drive at the top — so that cables can snake unobstructed to the floor (but your arrangements may be different). [DTE](#)

NEXT MONTH

Next month, we'll complete the hardware installation.



Mastering Joomla, part 1

Building a web site with a proper content management system behind it is now within reach of most. *Peter Sbarski* creates one using Joomla, an open source CMS.

PETER SBARSKI

Having received first-class honours in Computer Science at Monash University, Peter is currently undertaking a postgraduate degree. He also consults businesses on IT matters and develops custom software solutions. Peter enjoys programming, writing and fragging opponents.



SKILL LEVEL

● Beginner to intermediate

TIME TO COMPLETE

● 2-3 hours

REQUIREMENTS

● Web hosting with cPanel and Fantastico support.

INSIDE INFO

- Joomla! www.joomla.org/
- Jumba web hosting www.jumba.com.au/hosting/
- DreamHost web hosting www.dreamhost.com/shared/
- cPanel www.cpanel.net
- Fantastico www.netenberg.com/fantastico.php
- OnJoomla www.onjoomla.org

Joomla is a Content Management System (CMS) for creating and maintaining web sites. A CMS like Joomla means that, when the site is created, anyone with the right permissions can update the site (without resorting to HTML coding).

Joomla is an open source CMS which is reliable, scalable and extensible. In fact, Joomla is one of the shining examples of why open source applications can more than match it with commercial applications.

For this four-part Workshop series, we've chosen to build a community site to act as a meeting point for people interested in a particular topic (Joomla). First of all, it has to have regular news, articles (with talkback) and forums, as well as FAQs for new users. To this list we'll also add event notices, mailing lists, club information pages, image galleries and classifieds. With a community site there should be an incentive for users to register and participate; there also needs to be a clear communication channel between members and administrators. This series will give you an insight into building and maintaining a successful community site.

"Lead by example" is the motto for this Workshop. The web site we've built to accompany the series is called OnJoomla. Have a look at it, read our news and supplementary articles, register for an account and post on the forums. The site's address is www.onjoomla.org.

Before we start implementing Joomla, some planning must be carried out; the kind that happens with any web site. Decide what your community site will be all about: is it for a school, neighbourhood, gaming clan, sporting group or local police station? Figure out who your users are and what they want.

Keep focusing on this through the project and you won't lose sight of the original aims. Since we had to create a site to accompany the series, we decided to make it about Joomla. Our target users are folks new to Joomla but experienced users are also welcome. In fact, anyone interested in Joomla is welcome to visit and register.

THE REQUIREMENTS

First, we need a quick requirements list. For OnJoomla we came up with the following:

The administrator (or superuser) should be able to post and edit news items, news flashes and content items. These must be able to contain text and images. They must be able to archive or delete old news and content entries. They should be able to create and delete polls and Frequently Asked Questions (FAQ) pages.

There must be a way for users to post comments on content items and, optionally, rate them. Users should be able to join the site as members. They should only need to enter name, email and password to register. Only one registration should be required for the site and the forum. Only registered users should be able to rate and post comments on content items, post in the forums and vote in the polls.

There must be a forum with at least six categories: meeting place, general Joomla, Joomla for experts, tips and tricks, programming for Joomla and building a better web site.

Not all the requirements we came up with are listed above due to space considerations, but if you do this exercise properly you will develop a clear understanding of the site's required functionality.

General server information:

Operating system	Linux
Service Status	Click to View
Kernel version	2.6.9-22.0.2.ELsmp
Machine Type	i686
Apache version	1.3.34 (Unix)
PERL version	5.8.7
Path to PERL	/usr/bin/perl
Path to sendmail	/usr/sbin/sendmail
Installed Perl Modules	Click to View
PHP version	4.4.1
MySQL version	4.1.14-standard
cPanel Build	10.0.1-CURRENT 112
Theme	cPanel X v2.5.0
Documentation	Click to View



Fantastico's blue icon is quite a standout...

Joomla!

Short description: Joomla! is one of the most powerful Open Source Content Management Systems on the planet. It is used all over the world for everything from simple websites to complex corporate applications. Joomla! is easy to install, simple to manage, and reliable.
Homepage: <http://www.joomla.org/>

Joomla support forum
(We are not associated with the support forum)

New Installation (1.0.7)
Disk space required: 10.09 MB
Disk space available: 998.5 MB

Current installations:
None

Joomla installation — Can this get any easier?

The Joomla! installation. Nothing to do here...

Installation location
Install on domain:
Install in directory:
Leave empty to install in the root directory of the domain (access example: <http://domain/>). Enter only the directory name to install in a directory (for <http://domain/name/> enter name only). This directory SHOULD NOT exist, it will be automatically created!

Admin access data
Administrator-username (you need this to enter the protected admin area):
Password (you need this to enter the protected admin area):

Base configuration
Admin e-mail (your email address):
Admin full name:
Site name:

Install Joomla!

Getting ready to install Joomla!

Install Joomla! (2/3)
The MySQL database and MySQL user `jimstkvf_joom1` will be created and used for this installation.

- You chose to install in the domain `onjoomla.org`, in a subdirectory called `joomla`.
- The access URL will be: <http://onjoomla.org/joomla>.

Click on **Finish installation** to continue.

Add Redirect:
<http://onjoomla.org/> » <http://onjoomla.org/joomla/>
(Permanent) Add

Remove Redirect:
Remove

Current Redirects

[Go Back]

Redirection is nice and simple to set up with cPanel.

It is OK to revise your requirements as you develop your web site. This is a creative process. If you happen to think of a feature down the road, write it down and rank it according to the necessity. If you get an opportunity, add it in. Joomla! is a forgiving environment. If you install a wrong component or template it's easy to change or uninstall it. Feel free to experiment.

WEB HOSTING

The first thing you need is web hosting. Consider the amount of storage space and bandwidth quota you are given. Make sure that your web host supports at least one MySQL database (this is a Joomla! requirement).

The easiest way to install Joomla! is through something called Fantastico. Fantastico is an add-on component for cPanel, a common online control panel for administering web sites. Fantastico allows one- or two-click installations of things such as blogs, discussion boards and content management systems. You'll need to make sure that your hosting provider supports cPanel and Fantastico. Some web hosts don't use cPanel and have their own one-click installation systems, such as Dreamhost.com.

We chose an Australian company called Jumba for hosting our OnJoomla tutorial site (www.jumba.com.au/hosting). If you know in advance that you will have a lot of traffic, start out with an inexpensive hosting plan. You can always upgrade to a more expensive plan and dedicated hosting later.

Once you have signed up for hosting, you will receive an email with your account details. Access cPanel and look for Fantastico. Typically it's represented with an icon with a smiley face. Click on the icon.

In Fantastico, click on Joomla! on the left-hand side. A panel should open on the right with a brief description, a couple of links and a list of current installations. Click on the link New



Joomla! IS A SHINING EXAMPLE OF WHY OPEN SOURCE APPLICATIONS CAN MATCH IT WITH COMMERCIAL APPLICATIONS

Installation to begin setup. Installing Joomla! via Fantastico is really easy. Here's what you need to do:

In the Install-in-directory field enter `joomla`. We are doing this because we want to install Joomla! in a separate subdirectory, rather than in the root directory. Installing in a subdirectory is useful and clean, especially if you decide to do another Joomla! installation down the track. You will be able to have multiple active Joomla! systems in different subdirectories.

In the Administrator-username field enter a username for the administrator. Something like "admin" will do just fine (and you will not forget it). In the next field enter a password for your admin.

The next three fields are also self-explanatory. Enter an email address for your administrator (you can make it up now and then set it up later), his or her name and your site's name.

Take a deep breath and click on Install Joomla!. You should be transported to step 2. Click on

Finish Installation. Hopefully you should now be able to access your Joomla! installation. Go to <http://yoursite/joomla/> to check it out. There is only one more thing to do before we can start playing with Joomla!. We must set up page redirection. You will notice that if you go to <http://yoursite/> there is nothing there. Page redirection will seamlessly move users from <http://yoursite/> to <http://yoursite/joomla/>. Go back to your online control panel and click on the Redirects icon. When a new page opens, in the second field, enter the full path to your newly created Joomla! installation, eg. yoursite/joomla/. In our case, we entered onjoomla.org/joomla/. Then, from the drop-down box, select Permanent and click Add. That's it. You are done! Try accessing your domain. You will be automatically redirected.

GLOBAL CONFIGURATION

Joomla! is controlled via the administrator console. Go to <http://yoursite/joomla/administrator/> and



CONFIGURATION.PHP PERMISSION

Let's change the file accessibility permission for configuration.php so that we can write to it. Go back to cPanel and look for File Manager. Click on it and then navigate to the Joomla! directory (hint: look for the Joomla! directory in the "www" directory). Once you are in the Joomla! directory, look for configuration.php and click on it. On the right-hand side click on Change Permissions and then click on the check box which corresponds to Write and World (permission should change to 646). Finally click on Change.

Alternatively, you can use FTP to change file permissions. FTP into your account and use `chmod 646 configuration.php`. Most visual FTP clients will allow you to click on the file and change permissions interactively just like the cPanel File Manager. Once you have changed permissions reload the Joomla! Global Configuration page to see if it worked. To make the file un-writable, use `chmod 644 configuration.php` or uncheck the Write and World check box.

ADMINISTRATOR EMAIL

Remember how when you set up Joomla, you gave an email address to the administrator? It's time to make it work. You can either create a brand new email account or set up a forwarder. We decided to set up a forwarder to forward all emails sent to admin@onjoomla.org to an existing email account. Doing it via cPanel was very easy. In cPanel click on the Mail icon and then on Forwarders; now, type in the required information. Alternatively, if you want to create a separate email account for your administrator, click on Manage/Add/Remove Accounts and then on Add Account.



Congratulations. Your new front page!



Configuration.php is un-writable. A problem that is easy to fix.

Now you can use Global Configuration. Our job is done. (See "configuration.php permission", above.)

enter your admin username and password. First, let's have a look at Global Configuration which controls system-wide settings. Click on the Global Configuration icon.

Global Configuration data is stored in a file called configuration.php in your joomla directory. It is better to keep this file write-protected for better security. The Global Configuration window will show you immediately whether it is writable or not. If it is write protected you have to make it writable for a little while. See "configuration.php permission" (above) for more information about this procedure.

Here's what you can do in Global Configuration. On the Site tab set Site Offline to yes and customise your offline and system error messages. Click on Locale and set the appropriate time offset. Click on

Content and set Linked Titles to Yes. That will turn titles of content items into hyperlinks. Set Item Rating/Voting to Show (we will overhaul the voting system in a little while to make it more powerful than it currently is).

Click on the Metadata tab and in the first text box type a description of your site. Make sure that it isn't longer than 20-25 words. In the second box type some keywords. Your meta description and meta keywords will help some search engines rank your site. There are a few more things to change but we can do that next time. For now, click on the save icon. You should be automatically transported to the main menu. By the way, if you take too long in Global Configuration you will be logged out. You will have to log back in, change your settings and save them again.

FUN HOMEWORK

<http://extensions.joomla.org/> is a collection of components, modules and mambots for Joomla. There you can find: admin tools, calendars, core enhancements, forms, galleries, e-commerce utilities, editors, multimedia extensions and more. Browse this site and download anything that you think is useful. Soon you'll be able to add these components to your community site. [JTC](#)

NEXT MONTH

In our next instalment, the administrator console is given a whirl and we will start creating content, adding media and customising everything (and anything).

Colour basics, part 3

Selecting the right colour profile, when scanning or shooting, is crucial for your images to look their best. *Patrick Kirsch* explains how to ensure consistent colour reproduction.

PATRICK KIRSCH

Patrick Kirsch, former designer of APC, has worked in digital media and design for more than 15 years. He has extensive experience on computers, ranging from animating on Amiga, to video post-production, print, web and multimedia. Patrick is also a musician and a home cinema buff — just don't get him started on movies.



SKILL LEVEL

Beginner

TIME TO COMPLETE

One hour

REQUIREMENTS

Photoshop (version 6 or later); digital camera and/or scanner.

INSIDE INFO

● IphotoMinusCCC tutorial and download
www.photographical.net/scanner_profiling1_2.html

IN THIS SERIES

- Part 2 — April '06
Photoshop setup.
- Part 3 — June '06
Input device profiles.
- Part 4 — July '06
Printing accurate colours.

NEXT MONTH

● Next time around we'll look at the final step — printing at home with accurate colour.

Desktop scanners have come a long way in recent years. The quality is high, both in resolution (up to 2,400ppi) and bit depth (16 bits-per-channel).

Many photo-quality printers have scanners built in. Regardless, they still require colour profiles to scan accurately (at least one each to differentiate reflective, transparency and negative scanning — sometimes more for different film varieties).

Almost all scanners come with a TWAIN driver that, once installed, can be accessed from the File > Import menu item in Photoshop. These custom interfaces can vary, but somewhere in there should be an option to apply a colour profile specific to the scanner and media — and a target profile. If so, selecting the right profiles should be all that is required to get proper colour out of your scanner. However, scanner lamps will change their colour characteristics over time. You might wish to invest in a standard IT8 colour target and use the free profiling software IPhotoMinusCCC (see Inside Info) to generate a new colour profile for your scanner from time to time. This produces excellent, accurate profiles — which you'll need later to profile your printer (next month).

If you are scanning your old prints, negatives or slides for archival purposes, always scan at the highest resolution and bit depth that your scanner can manage — and with the widest-gamut target profile (eg. Wide Gamut RGB). You can later make a working copy of your image for printing at a lower resolution.

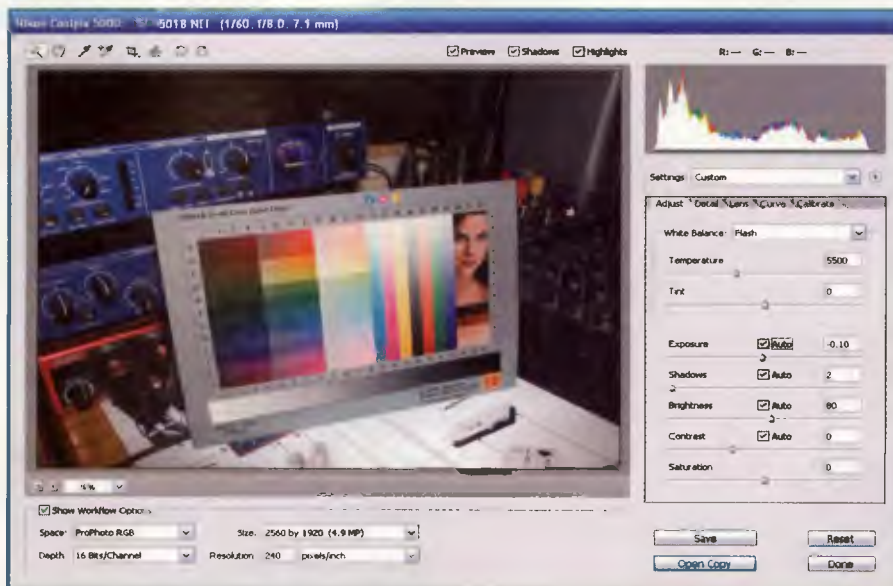
SHOOT'EM UP

Digital cameras, like scanners, range from basic consumer models to high-end pro gear. Consumer models tend to come with a locked colour profile (usually sRGB). Semi-pro and above give you the option to use other wider-gamut profiles, like Adobe RGB, and/or to shoot in Camera RAW.

If you have a basic model, your choices have already been made for you. sRGB represents a colour gamut that should be attainable by most desktop photo printers. This means your pictures will print fine, though some of the colour information (that hit your camera's sensor at the time of shooting) will be thrown away by the camera when it's converted to sRGB.

If your camera allows you to use Adobe RGB, more of the original colour information will be preserved in the saved JPEG (and can be printed on high-end inkjets with more vibrant results).

The best of all the various options is to shoot in Camera RAW. RAW saves the camera sensor data directly to the smart media without any irreversible modification. The downside is that the files are significantly larger and take longer to save. No need to worry about an input profile: the RAW importer knows the characteristics of different models of camera sensor and adjusts accordingly. A wide gamut target profile called ProPhoto RGB is available, and you can use 16 bits-per-channel to preserve quality for archival purposes. Once again, you can down-convert a copy of the image for printing later. [\[TIP\]](#)





eBay come, eBay go

Ever wanted to get into eBay — but not sure where to start? **Anthony Caruana** is here to help with an insider's guide to online auctioneering: getting started, buying and selling.

ANTHONY CARUANA

Anthony Caruana is an IT professional and long-time PDA user whose personal stash of devices is almost a perfect timeline of their evolution. Anthony, who ran the Melbourne Pocket PC User Group for two years, is also involved in the deployment and use of PDAs in corporate environments. Aside from keeping his life organised, Anthony uses handhelds for gaming, playing music and podcasts, and watching movies on-the-go.



SKILL LEVEL

Beginner

TIME TO COMPLETE

Varies

REQUIREMENTS

Web access

INSIDE INFO

- www.ebay.com.au
- www.escrowaustralia.com.au
- www.paypal.com.au
- www.austpost.com.au
- www.auctionsniper.com
- www.abidia.com
- www.ebay.com/download

We've all got something lying around the house that's too good to throw out (but would be worth something, if only you could find someone to buy it). Or maybe you're searching for that rare Kobe Bryant basketball card. That's what eBay is all about. Its *raison d'être* is to be the world's premier market place for bringing buyers and sellers together.

GETTING STARTED

Before entering or completing a transaction on eBay, there's a registration process to go through so you can join the other 180 million people on there. Creating a user account is straightforward, but there are a few things to consider.

eBay will collect some personal information such as your full name, address, phone number and email address. You must be over 18 years of age and sellers need to provide some further proof of identity such as credit card details (or by completing a paper-based form).

Your eBay username is very public, so by not making it too much like your real name you can make it hard for identity thieves to find out about you. Your password needs to be difficult for others to guess — and easy for you to remember. Some good rules of thumb are:

- Don't use your email address as a password.
- Avoid using dictionary words, as there are applications that can run through a list of words trying them against a known account.
- Don't use common substitutions. For example, the word "password" can be represented as "p@55w0rd". Many password-hacking programs implement these substitutions.
- Make your password at least eight characters long and use a mixture of upper and lower-case letters, as well as numbers and symbols (such as # or %).

At the completion of the registration, eBay will send you an email asking for confirmation. Once that's done, you'll be registered at eBay and able to bid for and sell things. Let's go shopping.

MAKING YOUR FIRST PURCHASE

Whereas large department stores have aisles and an enquiry counter, eBay has categories and searching.

SELLERS AND FRAUD

You've got to hand it to those Nigerians — they've got a scam for every occasion. One popular technique is to sucker sellers by using the Buy It Now option.

The scam works like this. You list an item with a Buy It Now price. The shuckster creates an eBay user account, "buys" the item and closes their eBay account. They send you an email telling you that they'll send you a money order as soon as they get a shipping tracking number from you.

They usually add a sob story about this being a gift for their teacher or prophet who is, sadly, in Nigeria where your item is hard to get for a decent price. To try and fool you into thinking they're a legitimate buyer, the user ID they use usually has a large number at the end so that it looks like they have a solid feedback rating.

The hassle with this is that, even if you're awake to it, you have still racked up some fees from eBay for the original listing and for making a sale. So, no matter what, you're going to have to waste some time recouping the fees from eBay.

Register: Enter Information Help

1 Enter information 2 Choose User ID & Password 3 Check Your Email

Register now to bid, buy or sell on any eBay site. It's easy and free! [Already Registered?](#)

Your privacy is important to us

We do not sell or rent your personal information to third parties for their marketing purposes without your explicit consent.

To learn more, see eBay's [privacy policy](#).

First name Last name

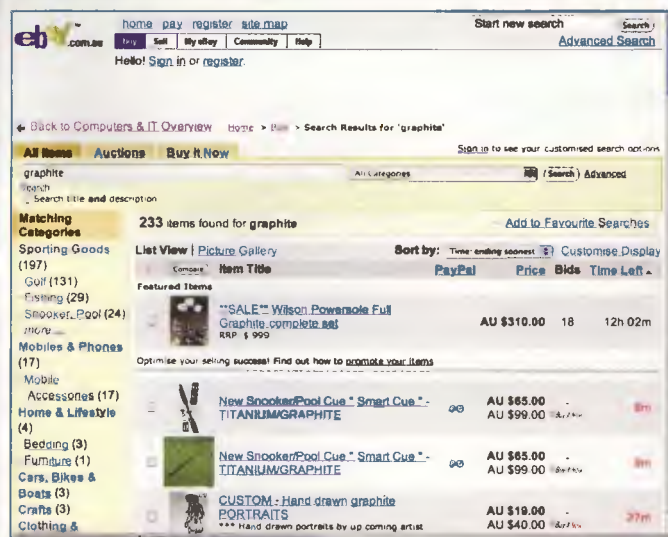
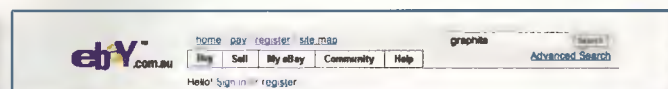
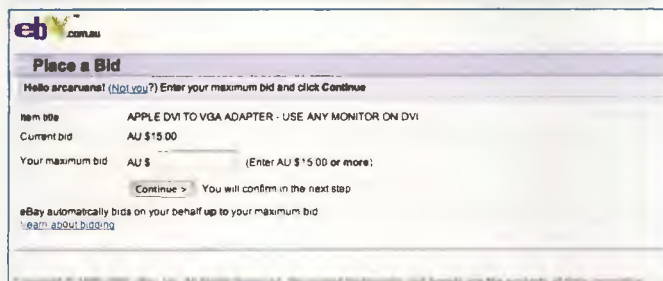
Street address

City

State / Territory Postcode Country

Primary telephone Secondary telephone (Optional)

Needed if there are questions about your account



Finding items to bid on is done by either browsing the category listings or by using the search.

1. What are you searching for?

Once you're at the eBay homepage, you'll see a search box near the top of the screen. Just type in some keywords about what you're searching for and hit the Go button.

2. Narrow down the results.

Depending on the criteria you've used, there may be many items from a large range of categories that match the search you entered. eBay makes it easy to refine this by showing you the categories that the search has hits in. Just choose the one that suits.

3. Select the item you want.

You can now browse this listing for what you're really after. If you open an item listing and want to return to this list, the Back button in your browser gets you back without the need to re-do the search.

Once you've found your treasure, open the item listing and look at it carefully. Is it exactly what you're after? Does the photograph look like a library photo from the manufacturer's web site or is it an actual picture of the item? When buying second-hand items, it's always best to see a picture of the actual product.

If you have any questions, contact the seller. eBay provides an Ask seller a question link on every item. This opens up a simple form that will send the seller a note with your question.

As well as asking questions, do some market research. Not everything on eBay is a bargain. Many listings are from electronic shopkeepers. They are not on eBay to make a quick buck from selling their unwanted goods; they're in it for a profit. While many of these merchants are selling below retail prices, not all of them are.

TAKING THE PLUNGE — BIDDING

After researching the market and finding the perfect bargain, it's time to come up with a bidding strategy. The real decision is whether to make a big bid early on, with a view to blowing competitors away, or waiting until the end and bidding at the last possible moment? Either strategy is valid but the first thing to decide is what's the highest price you're prepared to pay. When setting that limit, take into account the shipping cost. It's not unusual for items that are sourced overseas to have high shipping costs. Also take into account exchange rates.

When a bid is submitted, eBay doesn't automatically assign that amount to the auction. Instead, it uses the minimum amount needed to

win the auction. Let's say an item is currently at \$50. If you bid \$60 then the actual item price will only go to \$51. If someone bids \$52 your bid will automatically rise to \$53. This will continue until the price reaches \$60. At that point, if another bidder is prepared to go over \$60 you'll receive an email telling you that you've been outbid. You can either walk away or make a higher bid.

Once you've set your limit, *stick to it*. Don't let emotion take over. Walk away before you turn the potential bargain into a shopping disaster.

Some goods have a Buy it Now price. An offer for that amount will automatically win the auction. This can be a good strategy if the item is popular or rare and you're not sure that you'll

AVOIDING EBAY PITFALLS

There are a number of things you can do as a buyer to make your eBay experience as smooth as possible.

- Communicate with the seller if you have any questions. You can avoid any nasty surprises with a simple note.
- Look at the seller's profile. While the number of positive feedback results is important, look also at the negative and neutral comments if there are any. If you're spending a large sum of money, it's worth doing some extra research.
- Check the postage and handling costs carefully. Many sellers will quote a delivery cost based on normal postage in order to make their auction more attractive. Confirm the method of delivery and be prepared to pay a little extra to get a secure or tracked delivery.
- If the item you're buying is particularly valuable, or if you have any doubt about the honesty of the seller, either walk away from the transaction or use an escrow service. If the seller seems dicey

- and recommends an escrow service you've never heard of, walk away. There have been reports of shonky sellers setting up fake escrow services.
- If you can pay with a credit card that has some sort of buyer protection, then do that.
- Don't be tempted to contact the seller and carry out the transaction outside of eBay (as you'll be unsupported by eBay should a dispute arise).

Despite taking all the care in the world, it is possible that you can still end up in dispute with a seller. If that happens, eBay recommends a mediation service through SquareTrade. They offer a free web-based forum and the use of a professional mediator. If the dispute is with a local seller then you may be able to use the courts to settle the dispute. However, this can end up being a long and costly process.



Sell Your Item: Select Category

1 Category 2 Title & Description 3 Pictures & Details 4 Payment & Postage 5 Review & Submit

Select from all categories
Click below to choose a previously used category, or select a top-level category and click Continue. You will select subcategories on the next page.

-OR-
[Try the enhanced, easier category selector.](#)

Main category

Click to select

Antiques	Asian antiques, Ceramics, Antique Furniture, Textiles & more
Art	Aboriginal art, Australian & European Masters, Paintings, Prints & more
Baby & Maternity	Baby Clothes, Baby Toys, Nursery, Maternity Clothing and more
Books, Comics & Mags	New & used, modern & rare books, comics and magazines
Beauty & Health	Fragrances, makeup, skincare, nutrition, weight management, medical supplies and more
Business & Industrial	Businesses for Sale, Industrial Equipment and Machinery, Postage Supplies, Office Equipment

Sell Your Item: Select Category

1 Category 2 Title & Description 3 Pictures & Details 4 Payment & Postage 5 Review & Submit

Select from all categories
Click in the box below until you have selected a final subcategory. When you are finished, click Continue at the bottom of the page.

Main category
Select your Electronics subcategory.

Audio - Home Amplifiers: Integrated Amplifiers
Audio - Home Amplifiers: Power Amplifiers
Audio - Home Amplifiers: Pre Amplifiers
Audio - Home Amplifiers: Tube / Valve Amplifiers
Audio - Home Amplifiers: Other
Audio - Home Cassette Decks
Audio - Home CD Players
Audio - Home Hi Fi Systems: Mini / Micro Hi Fi
Audio - Home Hi Fi Systems: Component Hi Fi
Audio - Home Hi Fi Systems: Other
Audio - Home Karaoke: Complete Systems
Audio - Home Karaoke: Microphones
Audio - Home Karaoke: Mixers

[Try the enhanced, easier category selector.](#)

Sell Your Item: Describe Your Item

1 Category 2 Title & Description 3 Pictures & Details 4 Payment & Postage 5 Review & Submit

Item title *required
55 characters left, no HTML, asterisks, or quotes.
Ensure your title has specific details about your item. Get tips on [writing a good title](#).

Subtitle (AU \$0.49)
55 characters left.
Add a subtitle (searchable by item description only) to give buyers more information. See example.

Item specifics: Desktop PCs

Chip Type:
Processor Speed:
Memory (RAM):
Hard Drive Capacity:

Make your item easier to find

Apple Laptop Finder
Product Name:
Processor Speed:
Memory Size:
Brand Name:

[Enter item specifics to be included in](#)

Item description

Describe your item's features, benefits, and condition. Be sure to include in your description: Condition (new, used, etc.), original price, and dimensions or size. You may also want to include notable markings or signatures, or its background history. See more tips for [Socket LGA775 S&B](#).

Details Enter your own HTML.

Now select [HTML](#) from the drop down list below to quickly and easily build your listing.

[Can't view our description editor? \[View link settings\]\(#\)](#)

[Enter tips to start a new paragraph. \[Get more HTML tags\]\(#\). You can also change and format the text.](#)

get another chance to buy one. Bidding below the Buy it Now price will revert the auction to a normal "highest bid wins" auction.

COMPLETING THE TRANSACTION

By this stage, congratulations should be in order. The market research was done, the search was fruitful and the auction was won. All that's left is payment.

Payment options vary from auction to auction. For Australian sellers, direct payment into a bank account is most common. The seller provides banking details for depositing funds directly into an account. Once the payment is cleared, the seller should then send the item.

Many sellers can also receive credit card payments, using services such as PayPal. PayPal is like an online bank, allowing you to deposit money into an account by credit card. Visit www.paypal.com to learn more about this service.

The fundamental cornerstone of eBay is trust between buyers and sellers. As a buyer, it's up to you to pay before the item is shipped. However, if you have spent a large sum of money on an item, it might be worth using an escrow service for your own protection.

An escrow service is a licensed and regulated company that collects and holds a buyer's money. Once the buyer receives and approves the item from the seller, the escrow service then sends the payment to the seller.

eBay recommends www.escrow.com for transactions over \$500. Using an escrow service

Sell Your Item: Enter Pictures & Item Details

1 Category 2 Title & Description 3 Pictures & Details 4 Payment & Postage 5 Review & Submit

Title
Title

Pricing and duration

Starting price *required
AU \$1
A low starting price can encourage more bids.
Buy it Now price (AU \$0.00)
AU \$1
Set it the first buyer who meets your Buy it Now price.

Duration: 7 days
When listing is 1 day duration
Start time: Start listing when submitted
Schedule start time (AU \$0.25) Select a date: Select a time: AEST

Add pictures & gallery

Use thumbnail to add a great photo to your listing.

[eBay Advanced Picture Service](#) [eBay Basic Picture Services](#) [Test Your Camera](#)

Upgrade to [eBay Advanced Picture Service](#) at no additional cost. It's faster, lets you upload pictures of any size, your pictures.

Pictures (7 free)

To add pictures to your listing, click a **Dropbox**.

Picture 1 (AU \$0.25)

Picture 2 (AU \$0.25)

Picture 3 (AU \$0.25)

Picture 4 (AU \$0.25)

Picture 5 (AU \$0.25)

Picture 6 (AU \$0.25)

adds to the cost of the transaction for the buyer, so you'll need to factor that into the end price.

What this really means is that: Bid price + Shipping cost + Escrow fees = Final price.

For a \$500 transaction, the escrow fee is \$20. For a \$5,000 item, that cost moves to \$175. There's a fee calculator at www.escrowaustralia.com.au. Escrow Australia is an Australian service that works with (but is independent from) eBay.

READY, SET... SELL!

To create a listing for an item you want to sell, you'll need to prepare a few things. Start with a decent picture of the item you're selling by either taking a photo yourself or searching the internet. If you use a shot from a manufacturer's site it's a good idea to let potential buyers know so that they know that what they're seeing isn't exactly what they're getting.

Plan what you are going to say about the item. Think about when you bought it — what

attracted you? Is it rare or does it have some special property that sets it apart? Reeling off a list of specifications might make for a long description, but some imaginative words and a link to a web site with all the specs makes for an easier-to-read listing.

How much money do you want for the item? When you list the item you can set an opening price and a Buy it Now price. Setting a low starting bid might generate some interest but leave you short if the auction peters out. On the other hand, setting a price that's too high can discourage bidders. As a general rule, set the opening price near the lowest value that you're prepared to sell the item for. The Advanced Search can be used to find the final price for closed auctions similar to yours.

DELIVERY OPTIONS

Once you've worked out the basics, it's a good idea to work out what it'll cost to ship your item to the

EBAY HELPER APPLICATIONS

While the My eBay page for registered users is fine, you might find that it's a little limited if you plan to do lots of buying and selling. Fortunately, there are some third party applications that can help you on your way.

eBay provides its own helper, a free browser toolbar called, you guessed it, the eBay Toolbar (www.ebay.com/download). Providing you with an eBay search tool and quick access to the most commonly used eBay pages, it's an unobtrusive way to keep eBay handy. It also monitors your watched items and bids, and pops up a small alert window when you've been outbid (if the auction is drawing to a close). However, it's an IE-only tool.

If you use a PDA or smartphone, you can keep up with your auctions with Abidia (www.abidia.com). As the eBay web site is not really designed for the smaller screens of portable devices, Abidia pulls the information down from eBay (and Yahoo Auctions) and presents it in a way that makes it easy to bid on and create listings. There are versions for Pocket PC, Symbian, Palm and RIM devices (and it's free).

If you're sick of getting outbid at the last moment, you can try something like Auction Sniper (www.auctionsniper.com). This little puppy will bid for you during the last few seconds of an auction so that you don't get gazumped.

HELLO,

I would like to pay for this item via postal order, right now i am presently in malaysia, and i want to give it to my friend as a surprised birthday gift, so i will like to know if you can ship it to nigeria. i dont mind paying any amount for the shipping cost, please if you can do this for me i will be very grateful. if you accept, kindly send your full name and address which am going to send the payment to. Here's the shipping address.
Mr Agbeni Shina
29 ibukun street
Off western avenue
Surulere lagos
Nigeria 23401,
and also i will like you to give me the full quote of it including the shipping cost to lagos nigeria, and also i will like you to give me your full name and address so i can made the payment to you ASAP
Please Reply As Soon As Possible.

winning bidder. A quick visit to Australia Post's shipping calculator will sort that out. Measure the package and weigh it, enter the information into the calculator and record the costs. It's a good idea to ensure you have both east and west coast shipping costs as they can vary substantially, especially with large parcels. By having the costs in hand, you can include them on the listing and reduce the number of questions you'll get from potential buyers.

CREATE THE LISTING

Now that you've got all the pieces of the selling puzzle, it's time to assemble them. Go to www.ebay.com.au and click the Sell link at the top of the page. You can then choose whether to auction your item or sell it at a fixed price. Let's assume you're planning an auction.

You'll need to select a category for your item. An easy way to do this is to search for items like yours and use the same

categorisation. You can list in two categories but this will increase your listing fees. Within a category there are sub-categories so that buyers will be able to target items like yours easily. eBay has a Java-based category selector that is more intuitive than scrolling through a long catalogue as it lets you drill through categories and sub-categories until you find exactly what you're after.

Next, you'll need to provide a title for the listing and, optionally, a subtitle. Make it snappy and not just a boring one-liner. When buyers search, the title will be the first thing they'll read — so try to get their attention immediately.

At this stage, depending on what you're selling, you may be prompted to provide some other information. For example, if you're selling a PC, then you'll get asked for some generic information like hard disk capacity, RAM and processor speed. Again, this is to help buyers target what they want.

Now's the time where your earlier preparation will pay off. It's time to enter your Item Description. eBay allows you to enter HTML, so you can jazz up the description with formatting, tables, bullets and lots of other eye candy. As well as looking better, judicious use of formatting will make your listing easier to read. If you're not a HTML code-monkey, then you can use a HTML editor to create your text and copy/paste it over later.

WHAT'S YOUR PRICE?

Set the starting bid. If you're prepared to let the item go for a specific price, you can also set a Buy It Now price. However, if someone bids below the Buy It Now value then the sale will revert to an auction and the Buy It Now option will disappear from the listing.

How long do you want the auction to last for? If you're selling some unwanted concert tickets then there might be some time pressure — but most of the time, the default seven-day auction will be fine. You can choose between one and ten days.

A THOUSAND WORDS

eBay allows you to use a single image of your item for free (and up to a further 11 costing 25 cents each — at the time of writing). If you're selling a PC with a modded case then this can be a great way to highlight the uniqueness of the item.

You can make the listing more eye-catching by having an image adjacent to the item's title in the listing as well as using the Listing Designer to apply a theme around the Item Description. This will jazz up the view but, like all things on eBay, it does cost.

FINISHING UP

Let's face it — the reason you're doing this is to get some extra cash. So, you'll need to work out how you want to get paid. Direct deposit to your bank account is best. There aren't any transaction fees, it's fast and can be easily validated. However, it means you'll need to provide the buyer with your account number.

If you'd like to offer credit card payment, you can also do that by setting up a Paypal (www.paypal.com.au) account. That way, anyone, even if they aren't a Paypal user, can pay you with plastic. You can then transfer their payment to your bank account or use that credit for other purchases. However, there are charges for transferring money out, so make sure you factor that into your price.

You can also receive cheques and money orders but, in order to protect yourself, make it clear to buyers that you won't be shipping until payments clear. After you've entered everything you'll get a chance to review your listing and go back to rectify any errors you may find (or make alterations if you've changed your mind about something (eg. price etc.).

Gallery options
Appears to list picture
1" Gallery (AU \$0.99) (Requires a picture, [add a picture](#))
Add a small version of your first picture to Gallery and Listings. [See a sample](#)
1" Gallery Featured (AU \$14.99) (Requires a picture, [add a picture](#))
Add a small version of your first picture to Search and Listings and showcase your picture in the Featured area of the Gallery View. [See a sample](#)
1" Randomizer: Gallery selection next time I visit.
Picture options
Applies to all pictures
All Standard
Standard pictures will appear within a 400 x 400 pixel area
1" Express Pictures (AU \$1.29)
Express Pictures will appear within a 500 x 500 pixel area, or up to 800 x 800 pixel area, if your pictures are larger
1" Main Picture Show (AU \$0.99)
Multiple pictures will appear in a slideshow player at the top of the item page
1" Picture Pack (AU \$1.80 for up to 9 pictures or AU \$2.00 for 7 to 12 pictures)
Get Gallery, Superstore, Picture Show and additional pictures for [additional pictures](#). See also AU \$1.00

Listing designer
1" Listing designer AU \$0.10
Get both a theme and layout to complement your listing
Select a theme
Collectables (10)
Select a layout
Photo on the left
Photo on the right
Photo on the bottom
Photo on the top

Optima Intel Celeron 1.7GHz System
Intel Celeron 1.7GHz, 256MB, CDROM, 256MB, Win XP Home
Item number: 0700134003
You are signed in
Watch this item in my eBay | Email to a friend
Current bid AU \$10.00
Place Bid
Time left 3 days 28 hours
5-day listing, ends 25 Feb 06 19:00:00 AEDST
Start time 20-Feb-06 19:00:00 AEDST
History 2 bids (AU \$0.99 starting bid)
High bidder 6268474 (285 ★)
Item location Gold Coast, Queensland
Featured Plus Listing
Post to Australia
Postage costs AU \$40.00 - Regular
1" Package, Payment, Returns and return policy
Description
Item Specifics Desktop PCs
Seller assumes all responsibility for listing this item



Mastering video, part 3

When film professionals bring together all the footage, they call it the rough cut.

Seamus Byrne shows what's involved.

SEAMUS BYRNE

Seamus Byrne first got his hands on the family Super8 in the early '80s and was hooked. Moving onto video soon after, he made many short films in the backyard, testing the limits of in-camera trick photography. Come the '90s, Seamus was quick to adopt digital editing technology as he moved into professional video direction. Having managed multi-camera shoots with artists including the Foo Fighters and Fatboy Slim, he also regularly works on short film projects for the film festival circuit.



SKILL LEVEL

Beginner

TIME TO COMPLETE

1-3 hours

REQUIREMENTS

- Software install files plus your own footage.

IN THIS SERIES

- Part 2 - May '06**
Capturing and organising video source.
- Part 3 - June '06**
Editing concepts: rough cuts.
- Part 4 - July '06**
Editing concepts: finesse cutting.

This month we're onto the rough cut, and with it comes a flood of metaphors derived from the days of manual film editing. We've already met our bins, which were once literal bins full of film reels (an editor would manage their film reels across a number of bins to keep things just this side of chaos). Now we can talk about cuts, slices, splices and more, and — thankfully — doing this in our non-linear editing software of choice is far easier than those pioneering days of yore.

A rough cut is all about bringing together your footage for the very first time, so it's an exciting moment for everyone involved. Short of having shot an entire project in a single take, the film will now take on the shape it was given on the page. This cut is all about getting the paint on the canvas (without any concern for the finished masterpiece).

How long this will take is really a factor of how much footage you have and how many decisions need to be made on takes and angles. Don't worry too much about the choices you make — these aren't real cuts, so nothing is too hard to fix.

Let's get into some of the fundamentals of the rough cut you need to keep in mind.

FOLLOW YOUR LOGS

Did you make those logs I talked about last month? If not, it's a hard slog from here as you watch and re-watch your footage to remember what is what. You'll pay for that "saved" time now in a big way. Tsk, tsk. Told you so.

For the smart kids sitting up the front, now you can follow those logs and piece together your rough cut faster than a *Dirty Harry* car chase. Don't worry too much if you begin to notice where you could improve on the scripted or logged cutting decisions. Make some notes, if you like, but don't get stuck amongst the trees until you've seen the forest.

MAKE SOME BIG CHOICES

That said, there are some choices you do need to make right now. "They" say most films will have about 20 minutes of footage for every one minute of the final film. You may not have a tenth that much, but even at two-to-one, you're still looking at a lot of takes and angles you can't put into this cut. Again, use this time to organise some additional bins for multiple takes and angles for the same shot. And preview all the options again now to have a fresh think about which option you might like best. You'll want to test a few options while reviewing this rough cut later on, so don't lose what you don't use now.

TRIM LIGHTLY

Each clip of footage will have more at the start and end than you need, of course. For the rough cut, don't trim these down too hard. It's hard to assess what you can't see, so leave that extra bit of room at both ends now so you're only trimming again at the next phase.

IF IN DOUBT, DROP IT IN

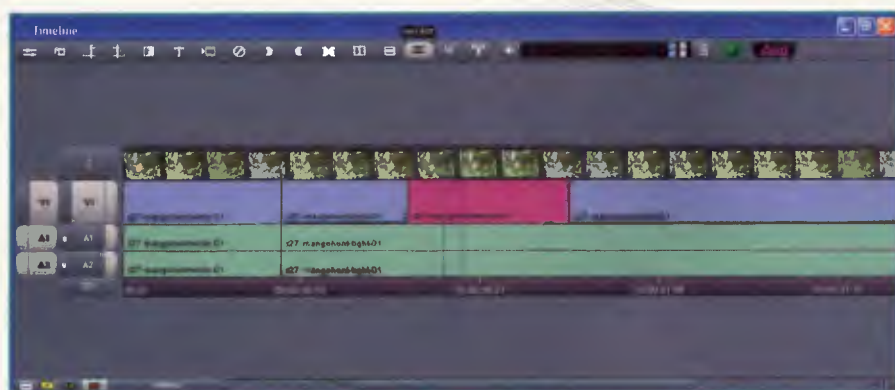
While you need to make some big choices, as mentioned above, this is not the time to decide to cut certain chunks of dialogue or entire scenes. It might be obvious they don't feel right to you, but until you've seen everything in context it's hard to be sure of the impact on the project as a whole.

INSERT CUTTING

At this stage, insert cuts are about as complex as we want the editing process to get. This is where we insert another piece of footage in the midst of a longer main shot. It could be a part of a dialogue sequence, or a cut away to illustrate what is being mentioned in the main shot (or myriad other reasons). We also keep the audio from the main shot as part of the deal (if we don't, it's just another cut).



Adobe Premiere Pro: you'll need to get used to toggling track-locking.



Avid Free DV: when trimming, Avid automatically shifts clips to the forward-most position in the timeline.



A ROUGH CUT IS ABOUT BRINGING YOUR FOOTAGE TOGETHER FOR THE FIRST TIME – AN EXCITING MOMENT FOR EVERYONE

This is a good skill to master quickly as you'll eventually want to do it a lot, so getting used to the technique will save a lot of time.

Regardless of the edit package you use, the key is to remember to lock off all audio layers for the section of video you are about to slice. This way you only remove the images, not the sound. Then you will use a slice tool to divide the clip at the positions you want your new clip to start and end (before "extracting" the section with the delete key).

This is also a good technique for thinking about how you might use some of those spare angles you might have of each shot in a scene. You may find some don't stand up well as the main shot but offer an interesting addition to a scene when used as an insert to add extra rhythm.

BIN THE RESULTS

A good habit in general but, importantly, for longer projects you should avoid cutting the entire film in a single timeline. Much better to put each scene together on its own, then save that timeline into the scene's own bin. Make a new timeline then rinse and repeat for the next scene. Then drop all these scenes together into a master timeline at the end to see your completed rough cut. When you're tweaking the details in each scene later on, it'll be a lot easier to manage.

STEP-BY-STEP: AVID FREE DV

Note: Where I've been discussing the "timeline", Adobe Premiere and Avid Free DV, like many packages, refer to the item you create as a "sequence" (which will then appear in the Timeline window when opened).

- 1 Choose Toolset > Source/Record Editing to get into the appropriate editing mode. This will add a preview window so you can check your clips before adding to the timeline.
- 2 Open your first Project Bin from the Bin window. In the SuperBin window all the bins clips will

appear. Right-click in this window and choose New Sequence. Click its name to rename it as appropriate. Double-click it to open it in the Timeline window. You may see no change at first, so don't be alarmed.

- 3 Drag your first clip to the timeline and the set of video and audio tracks will appear. It will automatically drop into the very start of the timeline.
- 4 Click the second button at the top of the Timeline window to enter Trim Mode. Make sure all tracks (V1, A1, A2) are highlighted (light grey) by clicking the track label where needed. Click and drag at each end of the clip to trim to the desired length. The cursor icon will change when you are close to each end. You can use the TC1 track at the bottom of the timeline to scrub the clip — or space bar to play and pause. With each trim you make, Avid will automatically shift the clip up to the forward-most position in the timeline.
- 5 Repeat steps 3 and 4 for each clip in the scene.
- 6 For insert edits, right-click A1 and choose Lock Tracks from the menu. Repeat for A2. Find the point at which you want to slice at the timeline and click Add Edit (third from right on Timeline buttons palette). Repeat for the end point of the section you want to remove. At the bottom left of the Timeline window, click the red arrow to enter Lift edit mode. Click the clip section and hit Delete to remove.
- 7 Drag the new clip to the end of the timeline and trim to less than you want to ensure you'll fit it into the space. With audio still locked, drag and insert the video into the available area. Re-trim to fit the space.
- 8 Delete unnecessary audio clips and unlock all audio tracks when done.
- 9 When you are finished with the sequence, go to the next scene's Project Bin and begin the process once more.

STEP-BY-STEP: ADOBE PREMIERE PRO

- 1 Open your project. In the Project window, right-click the default sequence (Sequence 01) and choose rename. Name it to suit the first scene you will be cutting together. Drag the sequence into the bin you're using to manage that scene's clips. If not already open, double-click the sequence to open it in the Timeline window.
- 2 Drag and drop the first clip you need into the Video 1 track of the timeline. You'll now also see the Audio 1 track filled across the same space.
- 3 Use the mouse to click and drag the ends of the clip in to the point where you want it to begin and end. When you mouse to near the end of the clip, you will see the cursor change to the trim tool. You can use the top area in the timeline to scrub back and forth across the clip to find the right trim point. The space bar will also play and pause.
- 4 When you are happy, click in the middle of the clip to drag it up to the start of the timeline.
- 5 Repeat 2 and 3 for each clip in the scene, then drag it up to meet the end of the previous clip.
- 6 For insert edits, hit C to change from the Selection tool to the Razor tool. On the track Audio 1, to the left of the track name, click the empty square to toggle track lock-on. Scrub the clip and then click on the video track to slice out the section you want to remove. Hit V to return to the Selection tool, then click and delete this section of the clip.
- 7 Drag the clip to be inserted into clear space on the timeline (ie. after the section you are already working on). Trim this clip down to less than you want, then drag it into the available space. Re-trim the new clip to suit the available space.
- 8 Finally, lock the Video track in the same way you locked the Audio track. Click and delete the audio portion of the inserted clip. Unlock all tracks.
- 9 When you are finished with this scene, right-click in the Project window and choose New Item > Sequence... and rename this sequence to suit the next scene in your project. Drag and drop this sequence into the appropriate bin. **ETC**

WHY WE CHOSE AVID AND ADOBE

- These Workshops aim to teach professional video editing concepts. Most consumer video editing software is designed for ease-of-use and lacks the controls found in professional video editors. Avid Free DV (a light version of Avid's professional broadcast editing packages) is the only free editor which incorporates many of these controls, while Adobe Premiere Pro is a popular high-end PC-based video editing package.

NEXT MONTH

- Now that we've got our rough cut, we'll be getting into some finesse cutting skills to really make your project flow like water.



Mastering Linux, part 19

In the final instalment of our Mastering Linux series, *Jarrod Spiga* walks us through how to upgrade a Linux kernel.

JARROD SPIGA

Jarrod Spiga is an infrastructure and network engineer who specialises in getting Linux and Windows systems happily coexisting with each other. He currently holds CCNA and numerous MCP certifications, and dabbles in Web application development in his spare time.



SKILL LEVEL

Advanced

TIME TO COMPLETE

Five hours

REQUIREMENTS

- An installation of Linux (CentOS 4.2 and Fedora Core 4 instances were used in the writing of this Workshop).

IN THIS SERIES

- Part 18 - May '06**
Backups and troubleshooting.
- Part 19 - June '06**
Kernel compilation.

The kernel is the software that makes up the core of your Linux system — it is the code that provides secure access to the hardware and the processes that are currently running on a system. Like most pieces of software, newer versions of the Linux kernel are occasionally released; incorporating new features (including hardware support) and fixing bugs or security flaws that exist in previous versions.

However, the process involved in upgrading the Linux kernel isn't as trivial as the one that you'd use for a regular software update — and the first sign of a botched kernel upgrade is usually a system that won't boot. This is the main reason why Linux users find kernel upgrades daunting, but if you've been OK using Linux, you should be able to overcome any hurdles.

There are usually two methods that you can use on an RPM-based distro to upgrade your kernel — the easier RPM upgrade and the hardcore compile-your-own option.

It should be noted that the procedures listed here are indicative of what's required in order to perform a successful upgrade on most systems. However, some other systems may require the use of slightly different procedures. Be very careful when upgrading your Linux kernel and ensure that you have performed a system backup beforehand, as we cannot accept any responsibility if something goes wrong with your system as a result of a kernel upgrade.

DETERMINING YOUR BOOT LOADER

Before you get into the upgrade process, you should make some preparations to ensure that you can recover from a failed upgrade. Your boot loader can be configured to load your upgraded kernel on the next boot only, which is useful if your system does not successfully boot your new kernel — since a second reboot will restore the old, stable kernel. The first thing that you should do is determine which boot loader is being used on your system — LILO or GRUB — as a different procedure is used to make each boot loader load a new kernel only once.

As the root user, run the following from the command line:

```
dd if=/dev/had bs=512 count=1 2>&1 | grep GRUB
```

If "Binary file (standard input) matches" is displayed after the command has executed, this indicates that the Grand Unified Bootloader (GRUB) is the boot loader that is running on your system. If the command returns no output, run the command again, replacing "GRUB" with "LILO". If the "Binary file (standard input) matches" message shows this time, the Linux Loader boot loader is being used.

You should also note the version of the kernel currently running on your system by running the following command:

```
uname -r
```

STARTING AN RPM UPGRADE

The easiest way to perform a kernel upgrade is to download the latest kernel RPM package and manually install it. Automated installations of kernel RPM packages are generally not advised (as the scripts aren't able to handle all the conditions that can occur during the upgrade).

If you have a multicore processor, or multiple processors, you should download the kernel-smp package which has been built with the code that supports process scheduling over multiple processors. If the regular kernel package is used, only one of your processors, processor cores or virtual processors will be able to be used on your system. If you have a Hyperthreading technology-enabled processor (and you wish to enable this technology within Linux), you should also use the SMP kernel.

While you can't use `yum` to download RPM packages without installing them, you can use the `yumdownloader` command to do so. Before you can use this command, you'll need to ensure that the `yum-utils` package is installed:

```
yum install yum-utils
yumdownloader kernel-smp
```

Once your new kernel has been downloaded, use the `rpm` tool to install it (note: the name of the package will differ depending on the latest version of the kernel available and your system architecture):



LINUX USERS FIND KERNEL UPGRADES DAUNTING, BUT IF YOU'RE OK WITH LINUX, YOU'LL OVERCOME ANY HURDLES


```
Rpm -ivh kernel-smp-2.6.14-18.0.1.EL.i686.rpm
```

Notice that the **i** switch was used with the **rpm** command as opposed to the **U** switch. New kernels should always be installed (as opposed to upgraded). If the upgrade switch is used, your current kernel will be replaced with the new one, leaving you with no avenue to boot back to the old kernel in the event of an installation failure.

RECONFIGURING THE BOOT LOADER

Once the new kernel has been installed, you should reconfigure your boot loader to load the new kernel on the next reboot.

If you're using the GRUB boot loader, open up the `/etc/grub.conf` file in your favourite text editor. Within this file,

you should see a number of entries that correspond to the different kernels that can be booted by your system. The top kernel in this list is entry 0, the next is entry 1, and so forth. Ensure that the `default=x` line refers to the kernel that is currently installed on your system (for instance, if your current kernel is the third kernel in the list, the line should read `default = 2`).

Exit from your text editor (saving your changes if required) and run the following from the command line to get GRUB to load your new kernel on the next system boot:

```
grub
savedefault --default=x --once
```

```
quit
```

where **x** is the kernel entry corresponding to your new kernel in the `/etc/grub.conf` file.

If you're using LILO, you can get it to boot your new kernel on the next boot by entering the following commands:

```
lilo -v -v
lilo -R 2.6.14-18.0.1.EL
```

where **2.6.14-18.0.1.EL** should be replaced by the actual version of the kernel that you installed.

Once the boot loader has been reconfigured, reboot your system and cross your fingers:

MENU	DESCRIPTION	CHANGE/REVIEW
Code Maturity Level Options	Contains basic options in regards to the maturity of drivers compiled for the kernel.	No review required.
General Setup	Contains basic kernel configuration options.	Local version — allows you to add a descriptor (such as a build number) to this specific kernel compilation.
Loadable Module Support	Allows the use of kernel modules. Should only be disabled if you're creating a monolithic kernel.	Ensure that loadable module support is enabled.
Processor Type and Features	Allows your kernel to take advantage of features and instruction sets specific to your CPU subsystem.	Review Symmetric Multi-processing (SMP) support. You may also want to customise the CPU support for your exact architecture as opposed to a more general i386/i686 architecture.
Power Management Options	Allows you to compile support for different power management functions on systems.	It's safer to not compile any power management support initially as power management can cause stability issues when configured incorrectly.
Bus Options	Allows you to add or remove additional bus support to your kernel.	When revising your kernel, you may want to remove support for buses that are not in your system in order to reduce the size of your kernel.
Executable File Formats	Allows you to specify what binary files the kernel can execute.	Ensure that support for ELF binaries is enabled — this is paramount to your system running properly.
Networking / Device Drivers	Allows you to specify what networking/hardware device drivers are compiled as modules or into the kernel.	For maximum efficiency, ensure that items matching hardware in your system are compiled into the kernel. Other items (or items that you aren't sure on) can be compiled as modules.
File Systems	Allows you to specify what file system can be read by the kernel.	Ensure that ext2 and ext3 file systems are enabled (it's probably a good idea to compile these directly into the kernel and not as modules). You may also want to add NTFS and FAT file system support.
Profiling Support	Can be enabled to determine where bottlenecks lie in a system.	Presently only an experimental feature of the Linux kernel and generally should not be enabled unless there is a specific need.
Kernel Hacking	Provides other kernel debugging and development functions.	Most options should not be enabled unless there is a specific need.
Security Options	Allows the kernel to utilise additional security patches that can be compiled into the kernel including grsecurity and SELinux.	If you have patched in grsecurity, you'll need to enable it. Most other options should be left as they are, unless there is a specific need to change something.
Cryptographic Options	Defines which cryptographic algorithms are supported by the kernel.	For the widest range of support, most algorithms should be compiled as modules.
Library Routines	Incorporates additional cyclic redundancy checks into the execution of system libraries.	Generally should be left alone unless there is a specific need to make changes to the configuration.



```

root@berlin:~/apc/linux-2.6.14.6
/boot/config-2.6.9-5.ELsmp:2149: trying to assign nonexistent symbol USB_TIGL
/boot/config-2.6.9-5.ELsmp:2123: trying to assign nonexistent symbol DEVFS_FS
/boot/config-2.6.9-5.ELsmp:2124: trying to assign nonexistent symbol DEVPTS_FS_XATTR
/boot/config-2.6.9-5.ELsmp:2125: trying to assign nonexistent symbol DEVPTS_FS_SECURITY
/boot/config-2.6.9-5.ELsmp:2127: trying to assign nonexistent symbol TMPFS_XATTR
/boot/config-2.6.9-5.ELsmp:2128: trying to assign nonexistent symbol TMPFS_SECURITY
/boot/config-2.6.9-5.ELsmp:2146: trying to assign nonexistent symbol JFFS2_FS_NAND
/boot/config-2.6.9-5.ELsmp:2289: trying to assign nonexistent symbol SECURITY_SELINUX_M
/boot/config-2.6.9-5.ELsmp:2317: trying to assign nonexistent symbol CRYPTO_SIGNATURE
/boot/config-2.6.9-5.ELsmp:2318: trying to assign nonexistent symbol CRYPTO_SIGNATURE_I
/boot/config-2.6.9-5.ELsmp:2319: trying to assign nonexistent symbol CRYPTO_MPILIB
Linux Kernel Configuration
Code maturity level options
Prompt for development and/or incomplete code/drivers (EXPERIMENTAL) [Y/n/?] y
Select only drivers expected to compile cleanly (CLEAN_COMPILE) [Y/n/?] y
General setup
Local version - append to kernel release (LOCALVERSION) [y/n/?] n
Automatically append version information to the kernel version [y/n/?] n

```

Menu configuration: use the make menuconfig command to finalise your kernel configuration.

Using the old configuration: your new kernel will contain new configuration options, but your existing configuration can be used to provide a baseline.

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [*] built-in [] excluded <M> module <> module capable

```

ode maturity level options --->
general setup --->
loadable module support --->
processor type and features --->
power management options (ACPI, APM) --->
bus options (PCI, PCMCIA, EISA, MCA, ISA) --->
executable file formats --->
Networking --->
device Drivers --->
file systems --->
profiling support --->
kernel hacking --->
security options --->

```

<Select> <Exit> <Help>

shutdown -r now

If all goes well, your system should boot up with the new kernel. If it does so, edit the /etc/grub.conf or /etc/lilo.conf file and change the default=x line to boot the new kernel on successive reboots. However if your system does not boot back up, switch it off and then back on again — your system will then load your stable kernel again.

MANUALLY COMPILING THE KERNEL

The most secure, performance-oriented kernels are monolithic — they have all required hardware support compiled directly into the kernel and kernel modules are not used at all. Compiling a monolithic kernel is difficult, especially if you have never compiled a kernel before — and is generally only performed in production environments. For regular use though, using a modular kernel is the most flexible solution.

In order to ensure that your new kernel can load modules, you should download the latest version of the module initialisation

tools from the kernel.org web site, compile and install them.

```

cd /usr/local/src
wget http://www.kernel.org/pub/linux/utils/kernel/module-init-tools/module-init-tools-3.2.tar.gz
tar -zxvf module-init-tools-3.2.tar.gz
cd module-init-tools
./configure --prefix=""
make moveold
make install
./generate-modprobe.conf /etc/modprobe.conf
cd ..

```

Next, consider whether you want to install the grsecurity patch on your kernel. grsecurity is a GPL-licensed extension to the Linux kernel that increases the level of security around the Linux kernel via a number of methods. This decision needs to be made now because it will influence which version of the Linux kernel that you compile.

grsecurity patches are not built for

every version of the Linux kernel, nor are they available for the latest kernels (this is to ensure that enough testing has been performed on the patch to ensure stable operation with newer kernels).

At the time of writing, the latest version of the Linux kernel was 2.6.15.6, while the latest grsecurity patch only supports the 2.6.14.6 kernel (a kernel that was only four months old at the time of writing). If you plan on using the grsecurity patch, you should download the latest version of the Linux Kernel that is supported by the patch — otherwise, you can download the latest version of the Linux kernel.

The following commands will download and extract the kernel source (you should adjust the version number listed in the following commands to the version of the kernel that you wish to download):

```

cd /usr/local/src
wget http://www.kernel.org/pub/linux/kernel/v2.6/linux-2.6.14.6.tar.gz

```



```
tar -zxvf linux-2.6.14.6.tar.gz
```

If you wish to install the grsecurity patch, it can be downloaded from www.grsecurity.org. Once downloaded, you should then use it to patch up the Linux kernel that you downloaded above:

```
wget http://www.grsecurity.org/grsecurity-2.1.8-2.6.14.6-200601211647.patch.gz
```

```
gzip -d grsecurity-2.1.8-2.6.14.6-200601211647.patch.gz
```

```
patch -p0 < grsecurity-2.1.8-2.6.14.6-200601211647.patch
```

At this point, you can start preparing your system environment for kernel compilation before the arduous task of configuring it:

```
cd linux-2.6.14.6
```

```
make clean
```

```
make mrproper
```

The easiest way to start your kernel configuration is to use the kernel that is currently running on your system as a baseline. The **make oldconfig** command compares configuration options in the new kernel to the options that were available in the current one.

Make oldconfig

If support for a certain feature or piece of hardware was compiled into your current kernel, that support should be automatically included in the new one (assuming that the new kernel still supports that option). When the support for new hardware or a new feature is encountered, you'll be asked whether you want to include that support in your new kernel.

This is the difficult part of compiling the kernel. In most cases, it's safe to accept the recommended option (unless you specifically have a reason to choose the alternate option). If you mistakenly choose the wrong value for an option, the next step will provide the opportunity to rectify the mistake.

When the **make oldconfig** command has imported your current configuration,



ONCE YOU'VE COMPLETED YOUR KERNEL CONFIGURATION, TAKE A BREAK FOR A WHILE BEFORE YOU START COMPILING

run the **make menuconfig** command.

Make menuconfig

This loads a text-based menu application that allows you to easily see what kernel options will be compiled directly into the kernel (marked by an asterisk) and what options will be compiled as modules and loaded by the kernel when needed. The table on page 123 describes the options that each menu section contains and a list of options that you will want to consider changing.

Once you've completed your kernel configuration, take a break for a while before you start compiling — it's a good idea to tackle the compilation with a clear and fresh mind so that you can work around any warnings and errors as quickly as possible without getting frustrated.

When you're ready, you can then commence compiling the kernel:

```
Make bzImage >> bzImage.log 2>&1
```

```
Make modules >> modules.log 2>&1
```

```
Make modules_install >> modules_install.log 2>&1
```

The actual kernel compilation can take a couple of hours, depending on your system specs. The output from the above commands will be redirected to the specified log files since compilation warning and error messages can often scroll by before you get the chance to read them. Before continuing, review these log files to ensure that no errors have been encountered during compilation.

If you don't encounter any errors, you can then copy the kernel, configuration and system map to the /boot directory and then create the boot image:

```
Cp .config /boot/config-2.6.14.6
```

```
Cp arch/i386/boot/bzImage /boot/vmlinuz-2.6.14.6
```

```
Cp System.map /boot/System.map-2.6.14.6
```

```
Mkinitrd /boot/initrd-2.6.14.6 2.6.14.6
```

After these instructions have been performed, it's then time to modify your GRUB or LILO configuration to allow the system to boot the new kernel. If you use GRUB, add the following lines to the /etc/grub.conf file (substituting the root parameter with the hard disk where your root partition is located, replicating the setting from the other kernel entries in the file):

```
Title Linux with grsecurity (2.6.14.6)
```

```
Root (hd0,0)
```

```
Kernel /vmlinuz-2.6.14.6 ro root=/dev/hda0
```

```
Initrd /initrd-2.6.14.6.img
```

If you use the LILO boot loader, add the following lines to your /etc/lilo.conf file:

```
Image=/boot/vmlinuz-2.6.14.6
```

```
Label=2.6.14.6
```

```
Append="root=/dev/hda0"
```

```
Read-only
```

```
Initrd=/boot/initrd-2.6.14.6.img
```

Once you've saved the changes to your boot loader configuration file, configure your boot loader to boot your new kernel for only the next reboot using the instructions above. With any luck, your system will boot your new kernel successfully on the next reboot — if not, reboot again and your stable kernel will load, giving you the chance to look for what may have gone wrong. [TIP](#)

NEXT MONTH

- This completes the Mastering Linux series. In our next issue, Jarrod Spiga begins a new series on integrating Linux into Windows environments.

Looking For a

Website Designer?

Yes, we deal with all the hassles for you

Bring your business **online** now



For more details about our design packages, please visit our website www.greatdesign.com.au

Phone: +61 (2) 9264 7507 Email: info@greatdesign.com.au

great design



apc downtime

HIGH PERFORMANCE PLAYTIME

GEAR

GAMES

BOOKS

CHIP CHAT



1. Circuitboard Coasters

CONTACT Fractalspin PRICE US\$19.99 ONLINE www.fractalspin.com VERDICT 4/5

Coffee rings abound on APC staffers' desks. This is totally unsurprising, considering the prodigious quantities of the stuff we drink to keep on typing through the night getting the magazine "out the door"

each month. It's a labour of love — but the cleaners hate it. After some minimal success with beer coasters from the local alehouse, we've decided to notch it up just one more geek level — circuitboard

coasters. The old-school circuitboards have a ring of plastic around them to protect the surface they're... er, protecting (and come in a nice metal, circuit-topped tin). Clean and classy.

2. USB G-Gloves

CONTACT usb.brando.com PRICE \$19.99 ONLINE usb.brando.com VERDICT 3/5

With windy winter wending toward us, temperatures are plummeting (and the USB desk fan will find its way into a drawer for the next six months). Now, your cup of coffee is warm thanks to a USB cup warmer,

but your dangling digits are getting frosty! Enter the G-Gloves. A pair of woollen gloves with built-in USB-powered heating pads. Perfect for those chilly nights with the PC or Xbox 360. So, what's not to like here?

Well, the design is a little... girly. And those with big-paw-like hands need not apply. Plus, you might get some funny looks around the office as well (so take them off before you go stand around the water cooler).

3. Creative Zen Vision: M

CONTACT Creative PRICE \$469.95 ONLINE <http://au.creative.com> VERDICT 4/5

Have you ever noticed how smug those people on trains/planes/buses seem, watching their DVD movies on their chunky notebooks? Fools! Next time, casually pull out this little baby with its

262,144 colour screen and iPod-like touchpad — how do you like your notebook NOW, huh? It's also a kickass MP3 player with 30GB of drive space and a no-fuss system for cataloguing and transferring

tracks from your PC to your pocket. Unlike your basic iPod unit (sans expensive add-on accessories), you get FM radio built in. Battery life is rated for four hours for video and up to eight for music.

4. Digital Video for Dummies, 4th Edition

PRICE \$39.95 PUBLISHER Wiley ISBN 0471782785 VERDICT 3.5/5

The rise of video-ready camera phones and still cameras means that churning out digital footage has never been easier. This book is a handy guide for those people wanting to take a bit more care than

simply slapping the raw video files on a disc. It covers some basic camera tips, how to import into common movie-editing programs, adding sound, editing techniques and transferring to DVD. There's

also some handy sections on digitising VHS tapes. One area where this book falls down is online video — it pretty much misses the whole Google Video phenomenon completely.



5. The Art of Intrusion

● PRICE \$26.95 ● PUBLISHER Wiley ● ISBN 0471782661 ● VERDICT 2.5/5

Wow! Who knew hacking was like being in a mid '80s *Miami Vice* episode? The collected stories here are pumped-up and flavoured with flamboyant "Eastern European types", failed cult-band dropouts and "hot

times" in Las Vegas. There's even a Texan prison hack (from behind bars) for good measure. Co-author Kevin Mitnick – the celebrated ex-hacker – admits from the outset that any of the stories could be partially (or

even completely) made up. It comes as no surprise, then, that almost all the hackers in these stories are cast as outlaws – social renegades cracking casinos, military networks and big business.

6. The Robot Builder's Bonanza, 3rd Edition

● PRICE \$34.95 ● PUBLISHER McGraw-Hill ● ISBN 0071468935 ● VERDICT 4/5

Everybody wants a robot. It's been the dream for generations, and big business has yet to come through with a suitable candidate for all our domestic needs. Stop waiting and build your own. *The Robot*

Builder's Bonanza can take even the greenest amateur into the heady heights of self-controlling (and somewhat useful) robots. It includes chapters on sourcing parts, the right tools for the

job, programming microcontrollers and just under 100 step-by-step robot plans and guides. The book even advertises it has 75 per cent fewer bad jokes! Now that's what we call progress.

7. Deflexion Laser Game

● CONTACT Thinkgeek ● PRICE US\$37.99 ● ONLINE www.thinkgeek.com ● VERDICT 5/5

Board games are all well and good, but, like sharks, they're better with lasers! This board game uses three types of mirrored playing pieces, which need to be aligned (at ninety-degree angles) to shoot a

laser beam at your opponent's Pharaoh (the equivalent of the King in a game of chess). A clear shot means victory, but hit a non-reflective surface and it's game over for you. So, now you can have a

board-game night and still fiddle with electronics at the same time! (You may, however, need to hide the TV remote before the evening kicks off.) Not recommended for people eye-height to the table.

8. How to Do Everything with Photoshop Elements 4.0

● PRICE \$39.95 ● PUBLISHER McGraw-Hill ● ISBN 0072262672 ● VERDICT 4/5

This book focuses specifically on tips an amateur photographer can use, rather than high-end/professional projects. For those stepping up to a quality editing system for the first time, it's a good

primer, covering layers, filters, advanced selection, customising brushes and RAW files. We like the fact that a lot of the example pics come from the author's own happy-snap collection – you know it's for real

when the examples include removing reflections from relatives' bald spots. Forget your fancy colour palette corrections; we're talking bald-spot removal here. Now that's where real digital photo editing is at.



The Elder Scrolls IV: Oblivion

Ben Parkes grabs a sword, beats up some guards and goes Grand Theft Equine in this year's hottest RPG.

CONTACT Take2Interactive

ONLINE www.elderscrolls.com

PRICE \$89.95

✓ Looks great; many quests and lots to explore.

✗ Lack of multiplayer support.

VERDICT ★★★★★

Tamriel is a world on the edge of Oblivion: the Emperor has just been assassinated, the heir to the throne is missing and the dragon fires that protect the lands from the demonic abyss have been extinguished for the first time in centuries. Tamriel has seen better days. So, slap on your favourite chain mail, grab your biggest, baddest war hammer and get ready to mash some faces into a bloody pulp in one of the best RPG games to date.

The world of Oblivion is big (really big). The environments are varied and include green rolling hills, ye olde time cities (with complementary rat-infested sewers), lakes and rivers, as well as ruins, demonic outer-world plains and seas of lava. Believe us when we say this game has it all. You can literally spend hours running around the game world just exploring. There is other stuff to do, though. Perhaps joining factions, conquering dungeons, cleaning up highway banditry or maybe harvesting reagents for some spells and potions takes your fancy? All viable options in Oblivion.

For the size of the world, travelling is a surprisingly painless experience. Just load up the map and you can select where you'd like to travel to — easy. Alternatively, buy (or steal) a horse and ride to your next location.

The quest system is comprehensive and, like everything else in the game, huge, adding up to hundreds of hours of game play. While it may



"So I auditioned for the Kong part — that's the lead by the way but they said they needed someone who was a little taller. I've got some RPG work coming up real soon though..."

sound a little daunting, the quest log and interface is well-implemented and very easy to use, so you won't spend hours running around confused about what to do next.

There are 10 races to choose from, each with their own looks, strengths and affinities. The amount of character customisation in Oblivion is truly amazing. You can create a mirror-image fantasy version of yourself or finally live out that dream and get the chance to slay demons, all while looking like Vanilla Ice. Whatever your choice, the customisation screen will let you do it, right down to the subtle nuances of the curve of your jaw line.

Oblivion also caters to a range of very different play styles and in turn, a vast range of players. Maybe you're the sneaky kind who likes skulking around in the shadows, stealing things and assassinating people? Fear not though, even if your stealthy skills aren't quite up to scratch and you get caught and thrown in gaol, if you have the right skills you might just be able to break out and reclaim your confiscated loot.

Even if you're more of an old-fashioned hack-and-slash type



of adventurer there's something for you here. Grab some weapons and armour and start mauling through hordes of demons.

Unfortunately, there's no multiplayer component to the game, which makes Oblivion a very different gaming experience to the hugely popular World of Warcraft. However, this does give you the chance to get well-acquainted with the environment without the distractions of nude night-elf dancers begging for gold at the local town.

Oblivion is a fantastic game; the visuals are stunning, the gameplay is far and away one of the most immersive and fun experiences on a PC yet and best of all, it gives RPG nerds the fix they've been hanging for since Neverwinter Nights.



"It's NOT a dress... it's a tunic."



JOYTECH™

www.joytech.net

Blazing Angels: Squadrons of WWII

Declan Kennedy pulls out a tattered copy of *Biggles: Up the Khyber* and hits the skies.

Now that gaming is less of a nerds-club, genres such as the venerable flight sim need to be significantly reworked in order to boost their popular appeal. *Blazing Angels* is an example of this being executed with success and precision.

Control of the various aircraft in the game is easily mastered, but it's not advisable to jump in with a keyboard; this is a console game at heart and analog controls are a must-have. The PS2-clone gamepad used

for testing defaulted to a rather questionable configuration, so it's a good idea to configure the controls yourself.

Once you're in, it's a genuinely polished gaming experience. The battlefields you fight above are nicely varied, from deserts to populous cityscapes. The cities are definitely the most impressive. Chasing a bomber squadron down the Thames is one of the most exciting moments you can have with your flight suit on.

Most of your time will be spent either defending or destroying a squadron or building, which does grate after a while. Still, the developers' aim seems to have been to capture the chaos of a high-speed air battle, and they've certainly managed that.

The game is graphically stunning, from the high-resolution sky textures, down to the dappled, reflective ocean. Everything scales smoothly, although, up close, some of the

ground units don't animate very believably.

As far as value for money goes, the game is a respectable 12 hours of campaigning across Europe, Africa and the Pacific. There are a couple of bonus mini-games as well, including arcade mode, which is a no-holds-barred skirmish in the skies, pitting the player against wave after wave of enemy fighters.

The multiplayer element looks promising with up to 16 players, 10 different game types and, the Holy Grail of PC gaming, split-screen play on the same machine. These make for a few compelling reasons why this game can be played until the DVD catches fire.

If you like the StarFox-school of aviation gaming, this game is definitely worth a look. With online community support, people could be playing this one for years to come.

CONTACT Ubisoft
ONLINE www.blazing-angels.com
PRICE \$89.95
 ✓ Stunning graphics; exciting and accessible.
 ✗ Missions are a little repetitive.
VERDICT ★★★★★

"Stay on target... stay on target!"



Dungeons & Dragons Online: Stormreach

Nick Race hacks and slashes through dungeons, over and over again.

Dungeons & Dragons passed me by as a whippersnapper — through careful avoidance of any scenario where a D20 was about to come out of someone's pocket. So, on loading *Stormreach* for the first time, I was wary — would I suffer under the yoke of the complex, esoteric rules of this 3.5 faithful MMO? Yes.

After conferring with friends and other players closely familiar with the ins-and-outs of pen and paper questing, all were impressed by the game's adherence to the D&D strict codices. Right down to creating your character from the five races and nine classes, which can be a quick affair with premade characters, or you can pore over every detail, skill, state and pimple on your avatar.

You'll have to party with others to complete even simpler, lower level quests. Disappointingly, parties are usually brief, random and often just plain fall apart, meaning your Looking For Group flag will be waving nearly the whole time. The quests themselves are very good, offering puzzles, riddles and some excellent design, but only offer a challenge the first

time through. Due to the extremely slow levelling (up to a maximum of level 10), you'll find yourself going through some dungeons over and over again just for the XP.

Progression through the game is awkward, both in quests and dungeons — turning in circles repeatedly just to land a single hit on a pesky kobold gets frustrating. Both the strength and weakness of

Stormreach is the adherence to the D&D rules. Having worked around millions of tables since the '70s, the rules don't translate too well into a fast-moving, low-player-interaction computer game. That said, if you're a D&D aficionado, then you might very well love this to bits — for those who have never rolled (or had the inclination to roll) a twenty sided die though, look elsewhere.



CONTACT Atari
ONLINE www.ddo.com
PRICE \$89.95
 ✓ D&D to the core.
 ✗ D&D to the core.
VERDICT ★★★★★

"This codpiece giveth unto me +6 to the ladies."

QUALITY ACCESSORIES FOR QUALITY ENTERTAINMENT



Call of Cthulhu: The Dark Corners of the Earth

John Gillooly faces the thing that should not be — a decent adventure game.

Rarely do we see games that aren't immediately reminiscent of what has gone before. In an industry where risk-taking has been all but wiped out in favour of lowest common denominator appeal, Call of Cthulhu: The Dark Corners of the Earth (TDCotE) stands out with a unique story (and gameplay too).

Based on a short story by H.P. Lovecraft, TDCotE sees you cast in the role of Jack Walters, a private detective who has recently recovered from a five-year bout of amnesia brought on by an encounter with

strange otherworldly creatures while investigating a cult. OK then.

Essentially a 3D adventure game that evolves into an action title, you must investigate the disappearance of a shop clerk in the strange fishing village of Innsmouth. As the investigation proceeds, you begin to uncover information about massacres of villagers (and a strange religious order that rules the town with an iron fist). As the game progresses you uncover more of the mystery and the pace picks up as you have to fight against villagers,

monsters and your own flagging sanity to survive.

Sanity is a key part of this game, you must try and limit your exposure to horrors such as bodies and monsters or you will start losing it. At times this is truly terrifying, and the effectiveness of the sanity system is testament to just how well-crafted an experience this game is. When the action does come it happens in sharp, visceral bouts that get your pulse racing as you frantically search for somewhere to hide or escape. When you do eventually get to use

weapons, you'll have to make every (limited) shot count.

Despite the class, this is not a game for everyone. It starts out slowly and takes a while to pick up. It's also a full-on horror title; not really something for the kids. (After all, it is a deliberately unsettling adaptation of a classic horror story, not Barbie Horse Adventures.) For those who crave story and immersion over finding the rocket launcher spawn point, there's many hours to be lost poking around in The Dark Corners of the Earth.

CONTACT Ubisoft
ONLINE www.callofcthulhu.com
PRICE \$49.95

✓ Deep, engrossing gameplay with true shock value.
✗ Slow and meandering; quite gruesome at times.

VERDICT ★★★★★

"I just know my walk-through's in here somewhere..."



Ghost Recon: Advanced Warfighter

Dan Chiappini goes to boot camp south of the border.

Set in Mexico City in 2013, Ghost Recon: Advanced Warfighter (GRAW) puts you in the role of Scott Mitchell, leader of the Ghost Recon team — the guys they call in when the crap really hits the fan. The storyline is something straight out of a Bruckheimer blockbuster and is the closest thing to being there (without the hazing and pack marches).

For a game that sees you juggling a range of weapons, telling your three-man team what to do and orchestrating reconnaissance and strikes from both the ground and air, the control system is intuitive and easy to use. It's done with a nifty little device called the CrossCom and thankfully it's a snap to operate, even in the middle of an alley firefight. This is important, especially when popping your head up when you shouldn't means they'll be cleaning you up with a sponge.

The missions are varied and let you run and gun between cover or sit

back and snipe. While the team AI is a little on the average side, you can trust them to get the job done either meat-shielding you as you lob grenades or taking out heavily armoured vehicles. Shootouts using the chopper's minigun are a great break-up from third-person running.

GRAW is nothing short of visually stunning even on a SD TV. The addition of HDR sees you squinting as you look into the sun. Smoke grenade plumes are thick and disorienting, while rolling a grenade under a car sees it violently tear apart

and burn on the road exactly as you'd expect. You'll even do it when no-one's around to see it again. Warn the neighbours — you will want to play this with the volume turned way up.

You can knock over the single player campaign in about eight hours. When you're done, jump online for the Xbox Live co-op campaign with a team of up to 16 players or in deathmatch modes.

If you own an Xbox 360, you can't afford not to play this game. If you don't own one, now's the time.

CONTACT Ubisoft
ONLINE www.ghostrecon.com
PRICE \$119.95
PLATFORM XBOX 360

✓ Looks fantastic; online and offline fun.
✗ Short single-player campaign; pissed-off neighbours.

VERDICT ★★★★★





BACKWARDS IS THE NEW FORWARDS

They don't make 'em like they used to — or do they? A recent press release issued by Anyware Computer Accessories had us getting all nostalgic for the good old days:

"Following the success of the TP-Link 108M wireless networking products Anyware released to the Australian and New Zealand markets in 2005, Anyware is pleased to announce that the TP-Link 54M range of wireless networking products are now also available." Gotta love it when a product is so successful that they release an *older* version. Coming in 2007: cheap and accessible Zip drive storage for all. Gentlemen, you may commence your downgrading.

HOT MULTICORE (like, in a sexy way)

When is a CPU thread not a CPU thread? When it's a **CoolThread™** dammit. For overworked IT admins, Sun's CoolThreads provide a way to get their mojo on while discussing the previously un-hot matters of power-to-heat ratios and 8-core / 32 simultaneous execution threads. Or not. But it seems not everyone is sold on the funk! At the time of writing, rival HP was engaged in a CoolThreads-debunking mission, posting some less than groovy benchmarks on its web site — and a picture of some bad '70s dress shirts. Fortunately, Sun is also cultivating an alternative-user image. Dig?

Why I Love Solaris Contest
Tell us your Solaris story for a chance to win an Apple iPod

How to win: Tell us your Solaris story for a chance to win an Apple iPod. You must be able to get 20x performance improvements on your homegrown applications with DTrace. Did your system consolidate multiple applications onto one system using Solaris Containers? Did your system proactively discover and correct an unusual fault using the Predictive Self-Healing capabilities of Solaris? Or could it be that you simply moved and ran your application on Solaris 10 with no complications?

Monthly Themes:

- Deploying open source applications
- Application performance with DTrace
- Tell us your "No Downtime" Solaris story

How to enter: easy and fast (no purchase required to enter)! Tell us your Solaris story in your own words in English using a minimum of 4 sentences and your name will automatically be entered into our monthly drawing. We will select winners each contest period. Sun will post monthly themes for entries on a quarterly basis.

Prize: Get the Software, Licensing Information, Guarantee Program, Programs & Promotions, Solaris Service Plans, Training.

Use: Solaris 10 Support, Documentation, Community & Resources, Developer Connection, Partner Programs.



iHoax macro

Owners of chunky first-generation iPods take heart: *we may* have found an even heftier model. Richard Boakes of www.boakes.org broke this "exclusive" when he posted this pic, claiming alongside: "Apple is poised to make history next Saturday when it unveils the world's first advertisement that can be seen from space". The supposed publicity stunt, apparently measuring the size of 80 football fields, was said to be tied to Apple's 30th birthday celebrations and the launch of a new touch-screen iPod. According to the site, the "ad" had been in development for almost two years, after Steve Jobs acquired the location (an abandoned mineral mine) "during a game of poker with (the late) Australian publishing and gaming tycoon Kerry Packer". Boakes later proudly admitted the whole thing was a joke, although the image is real (it's a tailings dam). See for yourself on Google Earth (30 31 S, 121 20 E).



But can it cook?

You know how it is. You're on the couch, spending a little quality time with *American Dad!* There's only one thing missing — a nice, cold beverage. In comes RoboBaby to save the day! Not actually the latest in a series of Japanese domestic robo-servants, little junior here is the creation of Washington DC-based technological artist Thomas Edwards, whose work seeks to "explore the interface between people and electronic machines, often by encouraging true interaction between them". Amongst Edwards' other various projects (www.t11s.com) is Sycophant, a head on tracks which follows the viewer around (whilst complimenting them). Sounds alright to us. Now pass the remote, bub.



Shop 4, 26 Henley Rd,
Homebush West NSW 2140
Tel: (02) 9763 5078
Fax: (02) 9764 4690
Email: sales@bbctech.com.au

52 George St,
Parramatta NSW 2150
Tel: (02) 9806 9777
Fax: (02) 9806 9077

Kiosk 233, Westfield Miranda
600 Kingsway Miranda NSW 2228
Tel: (02) 9525 2866
Fax: (02) 9525 2868
Website: www.bbctech.com.au

D-LINK WIRELESS NETWORKING



DWL-G510 \$38



DWL-G630 \$38



DI-624 Wireless Router 108Mb \$110



DGL-4300 Wireless Gaming Router 108Mb \$250



ADSL

DSL-G604T	\$125
DSL-504T	\$85
DSL-502T	\$70
DSL-G504G	\$60



DI-634M Wireless MIMO Router \$205



DWL-G520M PCI Wireless MIMO Card \$115



DWL-G650M PCMCIA Wireless MIMO Card \$95



DPH-120S VoIP Telephone \$165



SWITCHES

DES-1016R+	\$160
DES-1024R+	\$190
DES-1026G	\$295
DES-1008D	\$50
DES-1005D	\$38
DGS-1005D	\$75
DGS-1008D	\$130
DGS-1016D	\$420



ROUTER / DSL

DI-704P (4port, parallel)	\$65
DI-704UP (4port, USB)	\$85
DI-707P (7port, parallel)	\$115
DI-804HV (VPN, 4port)	\$160



DCS-G900 Wireless Internet Camera \$280



DNS-300 Network Attached Storage \$255



DKVM-2K 2 Port KVM Switch \$45



ANT24-0700 7dbi Antenna \$75



ASUS GAMING SYSTEM



ASUS A8N-SLI Motherboard
2x ASUS 256MB Geforce
EN6600GT-TD Graphic Card
AMD Athlon 64 Venice Core 3700+ 939 CPU
2x 512Mb 400MHz PC3200 DDRAM
200Gb SATA 7200RPM
8Mb Hard Disk Drive
16x DVD Writer +/- Dual layer
8-channel Integrated Sound Card
ATX Med. Tower Case with 550W
power supply; Floppy Disk Drive
19" Philips 190S6FS 8ms LCD Monitor
Logitech X-530 5.1 subwoofer with
Speakers; Microsoft Multimedia keyboard
Microsoft Optical wheel Mouse
2x Front USB Ports & 4x Back USB Ports
Integrated 10/100 network Card

\$2250



BAREBONE SYSTEM

T2-P Deluxe

ASUS T2-P DELUXE, SILVER,
INTEL 865G, SOCKET 478,
800Mhz FSB, MCE COMPAT,
AUDIO DJ, INSTANT ON RADIO

SPECIAL \$235



Call to find out massive discount offering on ASUS notebook

V68V740DD56PG

Intel Pentium Centrino M-740 1.73A, 512MB, 60G,
15.0SXGA, DVDDUAL, 802.11g, Windows XP Pro

M6BR730DL26PG

Intel Pentium Centrino M-730 1.6G, 256MB, 60G,
15.4WXGA, DVDDUAL, 802.11g, Windows XP Pro

W3N725DL26HG

Intel Pentium Centrino M-725 1.6A, 256MB, 60G,
14WXGA, DVD+DL, 802.11g, Windows XP Home

W1SGC755DL58PG

Intel Pentium Centrino M-755 2.0G, 512MB, 80G,
15.4WSXGA, DVD+DL, 802.11g, Windows XP Pro

W5GA740SM58PGW

Intel Pentium Centrino M-740 1.73G, 512MB, 80G,
12.1WXGA(Glare), DVDDUAL, 802.11g, Windows XP Pro

W2VC760DL58PG+BT

Intel Pentium Centrino M-760 2.0G, 512MB, 80G,
17.1TFT, Glan, DVDDUAL, 802.11g, Windows XP Pro

SALES@TEGCOM.COM.AU

**Smudge
tested under
water for
36 hours**

Create superior photo prints with your inkjet printer

- Glossy finish for true photo quality
- Bright white for high colour saturation
- Compatible with all inkjet printers
- Ideal for use with TONNY inks

Premium Photo Quality Paper

- 110gsm
 - 100 sheets
- A4 (210x297mm)...\$11.50 TPP3811

Glossy Photo Paper

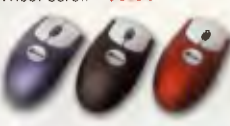
- 187gsm
 - 20 sheets
- A6 (105 x 148mm)...\$ 4.90 TPP1846
A4 (210 x 297mm)...\$12.90 TPP1811

Premium Glossy Paper

- 256gsm
 - 20 sheets
- A6 (105 x 148mm)...\$ 6.90 TPP2846
A4 (210 x 297mm)...\$16.90 TPP2811

**BUY 3
PHOTO
PAPER &
GET 1
FREE!**

*Of equal value or less

Internal 3.5" Card Reader • Easy front panel access • USB 2.0 multcard reader with one front panel USB 2.0 from MB  \$13.50	Internal 5.25" Card Reader • Easy front panel access • USB 2.0 multcard reader with 6.1CH audio port from MB • 3x USB 2.0 port from MB • 1 x 1394 port from MB  \$23.00	PCMCIA 10/100 Lan Card  \$20.00	Notebook Combination Lock  \$16.00	Notebook Cooler Pad Twin fan \$25.00  Tri fan \$29.00 	
10/100 PCI Network Card \$15.00 	PCI Sound Card 4 Channels \$15.00 	PCI USB 2.0 Card 4-Port \$15.00 	PCI Firewire Card 4-Port \$18.00 	PCMCIA Card 2-Port Firewire \$32.00 USB 2 \$32.00 	
USB Fan, USB Light \$15.00ea 	23 in 1 USB 2.0 Card Reader \$18.00 	USB 2.0 External HDD Case 2.5" \$18.00 3.5" \$28.00 5.25" \$58.00 	USB to RJ45 Network Adaptor \$16.00 	4-Port USB Hub USB 1.1 \$8.50 USB 2.0 \$13.00 USB 2.0 with power supply \$18.00 	
Case Fan Black \$5.00 Clear \$6.00 Clear with LED Light \$8.00 	USB to PS/2 Splitter Cable \$10.00 	Single USB 1.1 Card Reader XD, SD, CF, MS, SM \$8.00 	USB to Infrared Adaptor \$32.00 	USB Bluetooth Adaptor 30m \$26.00 100m \$29.00 	USB Optical Mouse Optical engine Wheel scroll \$9.50 
Slimline Clam CD Cases 10PK \$2.50 	CD Sleeves Saves storage space 100PK...\$3.50 	CD Case 40PCS \$3.90 80PCS \$4.90 128PCS \$8.90 	CD Pen \$0.95 	Stereo Headphone Built in microphone Ideal for gaming \$15.00 	Microphone \$8.00 

BUY ANY 5 TONNY CARTRIDGES & RECEIVE 1 PACK TONNY PREMIUM GLOSSY PAPER FREE! (TPP1846)

BUY NOW! For more info call 02 9223 2360 or FAX orders to 02 9223 5775

All orders are subject to our terms and conditions of sale. Pricing and stock availability is subject to change at any time without notice. Please note that pictures and illustrations are for display only and that the final product may vary. All products, brand names, trademarks are owned by their respective companies.

TEG Computers
Shop 502, Lvl 5, 33 Bligh St
Sydney NSW 2000
Tel: 02 9223 2360
Fax: 02 9223 5775
sales@tegcom.com.au

Adscroll Australia
Suite 103, 52 Atchison St
St Leonards NSW 2065
Tel: 02 9966 8688
Fax: 02 9906 3808
sales@adscroll.com.au

For wholesale inquiries contact
Adscroll Australia
02 9966 8688

SALES: 02 9223 2360**WWW.TEGCOM.COM.AU****Canon Ink Cartridges**Rated 9 out of 10
by PC User

Model	Genuine	TONNY
BCI-24BK	\$14.00	\$5.60
BCI-24C	\$33.00	\$7.20

Model	Genuine	TONNY
BX-3	\$49.00	\$28.00
BC-01	\$39.00	---
BC-02	\$39.00	\$28.00
BC-03	\$38.00	\$28.00
BC-05	\$50.00	\$30.00
BC-20	\$49.00	\$28.00
BCI-3eBK	\$25.00	\$ 8.80
BCI-3eC	\$19.00	\$ 6.40
BCI-3eM	\$19.00	\$ 6.40

Model	Genuine	TONNY
BCI-3eY	\$19.00	\$6.40
BCI-3PC	\$19.00	\$6.40
BCI-3PM	\$19.00	\$6.40
BCI-6BK	\$24.00	\$6.40
BCI-6C	\$24.00	\$6.40
BCI-6M	\$24.00	\$6.40
BCI-6Y	\$24.00	\$6.40
BCI-6G	\$24.00	\$6.40
BCI-6R	\$24.00	\$6.40

Model	Genuine	TONNY
BCI-6PC	\$24.00	\$6.40
BCI-6PM	\$24.00	\$6.40
BCI-11BK	\$19.00	\$4.90
BCI-11C	\$34.00	\$7.20
BCI-15BK	\$24.00	\$6.40
BCI-15C	\$44.00	\$7.20
BCI-16C	\$44.00	\$7.20
BCI-21BK	\$13.00	\$4.90
BCI-21C	\$28.00	\$6.40

Epson Ink Cartridges

Model	TONNY	Model	TONNY	Model	TONNY
T001	\$18.90	T0321	\$10.80	T0631/2/3/4	\$7.50
T003	\$ 9.90	T0322	\$ 9.50	S020089	\$9.90
T005	\$18.00	T0323	\$ 9.50	S020093	\$5.10
T007	\$ 9.30	T0324	\$ 9.50	S020097	\$9.00
T008	\$13.00	T0422C/M/Y	\$ 9.50	S020108	\$6.50
T009	\$15.00	T0461	\$ 8.90	S020110	\$9.50
T013	\$ 4.50	T0472/3/4	\$ 8.90	S020187	\$5.10
T014	\$ 7.90	T0491/2/3	\$ 8.90	S020189	\$6.50
T017	\$ 9.70	T0494/5/6	\$ 8.90	S020191	\$9.00
T018	\$10.60	T0540/1/2	\$ 8.90	S020193	\$9.50
T026	\$ 9.70	T0541/2/3/4	\$ 8.90		
T027	\$12.40	T0547/8/9	\$ 8.90		
T028	\$ 9.70	T0561/2/3/4	\$ 8.90		
T029	\$10.60	T5591/2/3	\$ 8.90		
T038	\$ 9.60	T5594/5/6	\$ 8.90		
T039	\$10.60	T0621	\$ 8.90		

**HP Ink Cartridges**

Model	Genuine	TONNY	Model	Genuine	TONNY
51625A	(#25)	\$46.00 \$28.00	C6614A	(#20)	\$44.00 \$24.00
51626A	(#26)	\$46.00 \$28.00	C6615DA	(#15)	\$44.00 \$24.00
51629A	(#29)	\$46.00 \$28.00	C6625A	(#17)	\$48.00 \$30.00
51633MA	(#33)	\$41.00 \$32.00	C6656AA	(#56)	\$32.00 \$24.00
51645A	(#45)	\$46.00 \$24.00	C6657AA	(#57)	\$51.00 \$32.00
51649A	(#49)	\$48.00 \$28.00	C6658AA	(#58)	\$37.00 \$26.00
C1823D	(#23)	\$51.00 \$30.00	C8727A	(#27)	\$31.00 \$24.00
C4841/2/3/4AA	(#10)	\$46.00 \$28.00	C8728AA	(#28)	\$35.00 \$26.00
C5010DA	(#14)	\$47.00 \$24.00	C8765WA	(#94)	\$31.00 \$27.00
C5011DA	(#14)	\$35.00 \$26.00	C8767WA	(#96)	\$42.00 \$33.00
C6578D	(#78)	\$51.00 \$30.00	C9363WA	(#97)	\$45.00 \$36.00

from
\$490Ink refill
kits for
HP, Canon,
Epson and
Lexmark**Lexmark Ink Cartridges**

Model	Genuine	TONNY	Model	Genuine	TONNY
12A1970	\$48.00	\$32.00	10N0016	\$46.00	\$36.00
12A1980	\$56.00	\$35.00	10N0026	\$49.00	\$39.00
17G0050	\$46.00	\$32.00	15M0120 (#20)	\$53.00	\$41.00
17G0060	\$53.00	\$35.00	18C0031 (#31)	\$43.00	\$35.00
13400HC	\$53.00	\$36.00	18C0034 (#34)	\$43.00	\$35.00
13619HC	\$52.00	\$38.00	18C0035 (#35)	\$45.00	\$37.00
10N0217	\$33.00	---	18L0032 (#82)	\$47.00	\$39.00
10N0227	\$35.00	---	18L0042 (#83)	\$53.00	\$41.00

Brother Ink Cartridges

Model	Genuine	TONNY	Model	Genuine	TONNY
LC-21BK	\$30.00	\$7.90	LC-04C/M/Y	\$16.00	\$7.50
LC-21C/M/Y	\$17.00	\$7.50	LC-47BK	\$32.00	\$7.90
LC-02BK	\$21.00	\$7.90	LC-47C/M/Y	\$18.50	\$7.50
LC-02C/M/Y	\$11.00	\$7.50	LC-800BK	\$32.00	\$7.90
LC-04BK	\$28.00	\$7.90	LC-800C/M/Y	\$18.50	\$7.50

HP Black Toner Cartridges

Model	Genuine	TONNY	Model	Genuine	TONNY
92298A	\$139.00	\$ 65.00	C8061X	\$165.00	\$ 85.00
C3906A/F	\$ 95.00	\$ 49.00	Q1338A	\$189.00	\$ 95.00
C3903A	\$120.00	\$ 59.00	Q2612A	\$ 95.00	\$ 59.00
C3909A	\$220.00	\$ 95.00	Q2613A	\$ 95.00	\$ 59.00
C4092A	\$ 87.00	\$ 49.00	Q2613X	\$125.00	\$ 69.00
C4096A	\$135.00	\$ 65.00	Q2610A	\$155.00	\$ 75.00
C4127A	\$145.00	\$ 65.00	Q2624A	\$ 96.00	\$ 59.00
C4127X	\$169.00	\$ 80.00	Q5942A	\$190.00	\$ 95.00
C4129X	\$210.00	\$ 95.00	Q5942X	\$279.00	\$125.00
C4182X	\$239.00	\$135.00	Q5949A	\$ 99.00	\$ 59.00
C7115A	\$ 89.00	\$ 49.00	Q5949X	\$169.00	\$ 75.00
C7115X	\$115.00	\$ 65.00	Q6511A	\$169.00	\$105.00

TONNY Colour Toner Cartridges

Printer Model	Model	Genuine	TONNY
HP LJ1500/2500, Canon LBP2410	C9700A (BK)	\$115.00	\$ 65.00
	C9701/2/3A (CYM)	\$135.00	\$ 79.00
HP LJ4600, Canon LBP2460/2040	C9720A (BK)	\$199.00	\$155.00
	C9721/2/3A (CYM)	\$262.00	\$185.00
HP LJ4500	C4191A (BK)	\$119.00	\$ 59.00
	C4192/3/4A (CMY)	\$165.00	\$ 69.00
HP LJ8000	C4149A (BK)	\$150.00	\$ 89.00
	C4150/1/2A (CMY)	\$225.00	\$155.00
Epson C900/1900	S050100 (BK)	\$ 99.00	\$ 79.00
	S050097/98/99 (CMY)	\$210.00	\$119.00
Epson C1000/C2000	S050033 (BK)	\$119.00	\$ 90.00
	S050034/5/6(CMY)	\$249.00	\$119.00

from
\$14⁹⁵Toner powder also
available for HP & Samsung**Samsung Toner**

Model	Genuine	TONNY
ML-1210D3	\$ 94.00	\$ 59.00
ML 1650D8	\$185.00	\$105.00
ML-1710D3	\$ 98.00	\$ 59.00
ML-2150D8	\$185.00	\$140.00
ML-4100D3	\$ 99.00	\$ 83.00
ML-4500D3	\$119.00	\$ 73.00
ML-6060D6	\$155.00	\$ 93.00
SCX-4216D3	\$ 99.00	\$ 79.00
SCX-5312D6	\$ 95.00	\$ 79.00
SF-5100D3	\$ 89.00	\$ 59.00

Brother Toner Cartridges

Model	Genuine	TONNY
TN-100	\$ 29.00	\$23.00
TN-200	\$ 42.00	\$23.00
TN-2025	\$ 74.00	\$59.00
TN-300	\$ 42.00	\$23.00
TN-3060	\$125.00	\$65.00
TN-8000	\$ 43.00	\$23.00
TN-6600	\$ 99.00	\$65.00
TN-7600	\$125.00	\$65.00

Lexmark Toner Cartridges

Model	Genuine	TONNY
Optra E210	\$129.00	\$59.00
Optra E310	\$225.00	\$69.00
Optra E/E+ X215	\$135.00	\$59.00
	\$105.00	\$59.00

Canon Toner Cartridges

Model	Genuine	TONNY
EP-22	\$ 99.00	\$49.00
EP-25	\$ 99.00	\$49.00
EP-26	\$109.00	\$69.00
EP-32	\$145.00	\$65.00
EP-52	\$185.00	\$80.00
E-31	\$189.00	\$85.00
FX-3	\$132.00	\$59.00
CART303	\$ 83.00	\$59.00



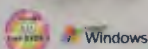
SCORPION TECHNOLOGY

SUPERBUDGET INTEL SYSTEM

INTEL Celeron 64bit 331

All-in-One Socket 775, Int. VGA/Audio
256Mb PC3200 Memory, USB2.0
80GB IDE 7200rpm, 2Mb Cache
Onboard 10/100 Lan
Aopen CDRW/DVDROM Combo Drive
Logitech 2 Channel Speakers
PS/2 Keyboard/Mouse Combo
ATX Case with 300w PSU / Front USB

\$460.00



Upgrade Options:

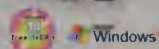
INCLUDE: ADD:
WinXP Home/Pro + \$130/\$205
Amd 256MB PC3200 + \$26
Celeron 336 64bit + \$19

STARTER AMD SYSTEM

AMD Sempron 64bit 3000+

All-in-One Socket 754, Int. VGA/Audio
512Mb PC3200, 10/010 LAN, USB2.0
120GB SATA 7200rpm, 8Mb Cache
16x Dual Layer DVDRW
17" LCD Monitor, 12ms Response
Logitech 2 Channel Speakers
PS/2 Keyboard/Mouse Combo
ATX Midi Tower with 300w PSU

\$879.00



Upgrade Options:

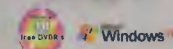
INCLUDE: ADD:
WinXP Home/Pro + \$130/\$205
Canon iP4700 Printer + \$89
AMD Sempron 3400+ + \$55

STANDARD AMD SYSTEM

AMD Athlon64 3200+

Gigabyte (NForce3 Chipset)
512Mb PC3200, 5.1 Audio
160GB SATA 7200rpm, 8Mb Cache
128Mb ATI Radeon 9250 Videocard
16x Dual Layer DVDRW, Gigabit L
17" LCD Monitor, 12ms Response
Logitech 2 Channel Speakers
PS/2 Keyboard/Mouse Combo
ATX Case with 300w PSU / Front

\$1130.00



Upgrade Options:

INCLUDE: ADD:
WinXP Home/Pro + \$130
Add 512Mb PC3200 + \$45
Samsung ML-1740 + \$135

HOME THEATRE PC SYSTEM

AMD Athlon64 3200+

nForce430 with Onboard 6150 VGA
1024Mb PC3200, Onboard 7.1 Audio
250GB SATAII 7200rpm, 8Mb Cache
16x Dual Layer DVDRW, Gigabit LAN
Logitech Cordless Desktop MX3000
Zalman HD160 Black HTPC Case
400W ATX Power Supply, Low Noise
Dvico Dual Digital HDTV Tuner
Windows XP Media Centre Edition

\$1799.00



Upgrade Options:

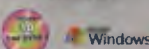
INCLUDE: ADD:
AMD Athlon 3500+ + \$80
AMD X2 3800+ Dual Core + \$230
Viewsonic VX924 4ms + \$510

MULTIMEDIA AMD SYSTEM

AMD Athlon64 3500+

Gbyte/Asus (VIA K8T890 Chipset)
1024Mb PC3200, 5.1 Audio, GB LAN
250GB SATA 7200rpm, 8Mb Cache
256Mb GeForce 6600, 16x DVDRW DL
Compro Analog/Digital HDTV Tuner
19" WideScreen LCD Monitor
Logitech X-530 5.1 Speakers
Logitech Cordless, Card Reader
Antec SLK1650B Case with 350w PSU

\$1950.00



Upgrade Options:

INCLUDE: ADD:
WinXP Home/Pro + \$130/\$205
AMD X2 Dual Core 3800+ + \$139
Fuji Xerox C525A Laser + \$515

SCORPTEC STINGER

AMD Athlon64 X2 4400+

ASUS A8N-SLI Premium
1024Mb Corsair PC3200 Cas2
2x WD 2500KS 250Gb in RAID 0
XFX 7800GT 512Mb Overclocked
19" Samsung 940B 8ms, WinXP P
Creative Audigy 4, 2x DVDRW (16
Logitech MX-518, Media Elite K b
Logitech X-530 5.1 Speakers
Antec SLK3000B, with SP-500 PS

\$3850.00

**PC AUTHORITY
A-LIST 6/6
PC POWERPLAY
POWER 9/10
AWARD WINNER**

Upgrade Options:

INCLUDE: ADD:
Add 1Gb Corsair PC3200 + \$239
XFX 512Mb 7800GTX + \$399
3yr Onsite Warranty + \$149

Images are for illustration purposes only.

3 YEAR ONSITE WARRANTY ON ALL SYSTEMS FOR ONLY \$149*

MOTHERBOARDS

ABIT NF8-V S754	\$ 110
GIGABYTE K8VM800M S754	\$ 69
ABIT KN8-SLI	\$ 170
ASUS A8N-VM CSM	\$ 139
ASUS A8N-SLI	\$ 165
ASUS A8N-SLI PREMIUM	\$ 255
ASUS A8N32-SLI DELUXE	\$ 305
ASUS ABR-MVP	\$ 195
ASUS ABR32-MVP DELUXE	\$ 275
DFI RD200 CF-DR	\$ 299
DFI NF4-SLI ULTRA INFINITY	\$ 149
DFI NF4-SLI INFINITY	\$ 190
DFI UTNF4SLI-DR EXPERT	\$ 299
DFI NF4SLI-DR	\$ 310
DFI NF4SLI-DR VENUS	\$ 425
GIGABYTE K8NSC-939	\$ 110
GIGABYTE K8VT890-9	\$ 129
GIGABYTE K8N-SLI	\$ 149
GIGABYTE K8NPRO-SLI	\$ 159
MSI K8N DIAMOND PLUS	\$ 325
ABIT AW8 MAX	\$ 320
ABIT NIB-SLI	\$ 255
ASUS P5P800-MX	\$ 95
ASUS P5LD2-VM	\$ 155
ASUS P5LD2 DELUXE	\$ 225
ASUS P5ND2-SLI DELUXE	\$ 229
ASUS P5N32-SLI DELUXE	\$ 295
ASUS P5WD2-E PREMIUM	\$ 339
ASUS P5WD02-W5	\$ 449
GIGABYTE G1975X	\$ 360
GIGABYTE 8AENXP-D	\$ 249
GIGABYTE 8IPF750	\$ 105
GIGABYTE 8I865GV-MK-775	\$ 105
GIGABYTE 8I945P-PRO	\$ 185
GIGABYTE 8I945P-PRO	\$ 219
GIGABYTE 8N-SLI-QUAD-ROYAL	\$ 345

VIDEOCARDS

ASUS 9250 128MB AGP	\$ 59
GIGABYTE FX5500 256MB AGP	\$ 89
LEADTEK 6600GT 128MB AGP LIMITED	\$ 230
LEADTEK 6800XT 128MB	\$ 249
MSI RX9250 / RX9250 DVI	\$ 75/85
FXF 7800GS 256MB AGP	\$ 520
FXF 7800GS 256MB AGP O/C EDITION	\$ 545
FXF MX4000 64MB / 6600GT 128MB	\$ 49/235
ASUS EAX3005E-X-7D 128MB	\$ 49
ASUS EAX1300PRO 256MB	\$ 145
ASUS EAX1600PRO 512MB	\$ 220
ASUS X1900XT / X1900XTX 512MB	\$ 820/930
BFG 7400GT 256MB O/C EDITION	\$ 390
BFG 7800GT / 7800GTX 256MB PE	\$ 525/835
BFG 7900GT O/C EDITION	\$ 629
GAINWARD BP7900GTX 512MB	\$ 869
GEcube X1900XT 512MB	\$ 879
GEcube X1900XTX 512MB PE	\$ 899
GIGABYTE 7600GT	\$ 389
GIGABYTE 7900GT 256MB	\$ 575
GIGABYTE 7900GTX 512MB	\$ 1040
LEADTEK 7300GS 128 / 7600GT 256	\$ 99/345
LEADTEK 7800GTX / 7800GTX EXTREME	\$ 735/825
MSI 6600GT 128 / 7800GTX 512	\$ 219/760
MSI RX800 256MB / RX850XT 256	\$ 315/550
POWERCOLOR X800GTQ 256MB	\$ 299
POWERCOLOR X1800XT CF MASTER	\$ 899
FXF 6600 256MB DUAL LOW PRO	\$ 159
FXF 6600GT 128MB	\$ 230
FXF 6800XT 512MB EXTREME PE	\$ 315
FXF 7800XT 512MB EXTREME	\$ 999
FXF 7600GT XXX EXTREME 256MB	\$ 1149
FXF 7900GTX 512MB 665/1630MHZ	\$ 390
FXF 7900GTX 512MB 675/1700MHZ	\$ 950
FXF 7900GTX 512MB 690/1750MHZ	\$ 975
FXF 7900GTX 512MB 690/1750MHZ	\$ 1050

MEMORY

A-DATA 256MB PC4000	\$ 60
A-DATA 512MB PC3200	\$ 75
A-DATA 1GB SINGLE / 1GB KIT	\$ 129/130
CORSAIR 512MB XMS3200	\$ 110
CORSAIR TWINX 1024-3200C2	\$ 185
CORSAIR TWINX 1024-3200XLP	\$ 215
CORSAIR TWINX 2048-3200C2	\$ 359
CORSAIR TWINX 2048-3500LPRO	\$ 499
CORSAIR TWINX 512-4000	\$ 160
CORSAIR V5124KIT PC3200	\$ 135
CORSAIR V5512MB PC3200	\$ 70
CORSAIR V5512KIT PC3200	\$ 75
GEIL 1GB KIT / 2GB KIT PC3200	\$ 135/275
GEIL 1GB KIT PC3200 NF4 EDITION	\$ 239
GEIL 1GB KIT PC3200 CAS 1.5	\$ 350
GEIL 512MB PC3200 / 512MB KIT	\$ 75/89
GEIL 256MB / 512MB PC3500	\$ 69/110
KINGMAX 256MB PC3200	\$ 40
KINGMAX 256MB PC3500	\$ 55
KINGMAX 512MB KIT PC3200	\$ 75
KINGMAX 1GB KIT PC3200	\$ 135
KINGMAX 1GB PC3200	\$ 135
KINGMAX 2GB KIT PC3200	\$ 299
KINGSTON 1GB KIT PC3200	\$ 140
KINGSTON 2GB KIT PC3200	\$ 280
OCZ 1GB KIT PC3200 VALUE	\$ 125
OCZ 1GB KIT PC3200 PREMIER	\$ 135
OCZ 512MB KIT PC3200	\$ 89
OCZ 2GB KIT PLATINUM PC3200	\$ 390
OCZ 2GB KIT PLATINUM PC4000	\$ 480
A-DATA 512MB PC4000 DDR	\$ 79
A-DATA 2GB PC4000 DDR	\$ 299
COSAIR 512MB KIT PC4200 DDR2	\$ 80
CORSAIR 1GB KIT PC4200 DDR2	\$ 145
OCZ 1GB KIT PC2-4200 VALUE	\$ 149
OCZ 1GB KIT PC2-4200 PLATINUM	\$ 330

MODEMS / NETWORKING

D-LINK ADSL MODEM DSL-200	\$ 49
D-LINK ADSL MODEM DSL-502T	\$ 55
D-LINK ADSL MODEM DSL-504T	\$ 80
D-LINK ADSL MODEM DSL-G604T	\$ 12
DYNALINK RTA100 ADSL MODEM	\$ 69
LINKSYS ADSL MODEM AG241	\$ 11
LINKSYS ADSL MODEM WAG54G	\$ 14
LINKSYS ADSL MODEM WAG54GP2	\$ 23
NETGEAR ADSL MODEM D6834	\$ 92
NETGEAR ADSL MODEM D6834G	\$ 129
SMC ADSL 7506BRA	\$ 69
SMC ADSL 7904WBR4 WIRELESS	\$ 11
D-LINK DBT-122 BLUETOOTH	\$ 12
ZYXEL ADSL P-660H	\$ 95
ZYXEL ADSL P-661H	\$ 10
ZYXEL ADSL P-661HW	\$ 15
D-LINK DBT-122 BLUETOOTH	\$ 58
D-LINK DGS-10050 6 BIT SWITCH	\$ 85
D-LINK DGS-10080 6 BIT SWITCH	\$ 13
D-LINK DES-10050	\$ 40
D-LINK DES-10080	\$ 55
D-LINK DI-707P ROUTER	\$ 11
D-LINK DI-808HV ROUTER	\$ 16
D-LINK DI-650 510W WLESS NIC	\$ 40
D-LINK DI-650 510W WLESS MIMO	\$ 11
D-LINK DWL-G630 PCMCIA	\$ 39
D-LINK DWL-G650M PCMCIA MIMO	\$ 99
D-LINK DGL-4300 GAMING ROUTER	\$ 24
D-LINK DI-624 WIRELESS ROUTER	\$ 75
D-LINK DI-624 WIRELESS ROUTER	\$ 99
D-LINK DI-634M WLESS ROUTER	\$ 15
D-LINK DWL-G730AP ROUTER	\$ 10
D-LINK DWL-G122 / DWL-G132	\$ 55
LINKSYS PAP2 VOIP	\$ 99
LINKSYS SPA9000 IP PBX SYSTEM	\$ 48

FREE
SCORPTEC MUG

AUSTRALIA WIDE DELIVERY, INCLUDING COD!

Scorpion Technology Pty Ltd, 1/100-110/111 Sturt Street, Melbourne VIC 3000
Value All prices are in Australian Dollars only and include GST
24hr Visa - MasterCard Bankcard, 4 - 10% / 10% S - 10% / 10%
Direct Debit / Bankcard / Debit / Credit / 001-111-1111
Prices subject to change. Errors and Omissions Excepted
All Rights and Trademarks are property of their respective owners.

SCORPION TECHNOLOGY OFFERS CORPORATE, GOVERNMENT AND EDUCATIONAL ACCOUNTS. YOU WILL BE AMAZED AT OUR COMPETITIVE PRICES. WHETHER YOU ARE AFTER A DESKTOP SERVER OR NOTEBOOK, YOU WILL FIND AN AFFORDABLE PRICE. SCORPTEC. IF YOU WOULD LIKE AN EXCLUSIVE SERVICE AND TAILORED TO YOUR BUSINESS, ASK TO SPEAK TO OUR CORPORATE DEPARTMENT TODAY! **CALL: 1300-726-770 (Ext 1)**



ASUS W3Z32DL18PG NOTEBOOK

HOT

AMD TURION MT32
1.8GHZ, 1GB DDR, 60GB

14" LCD SCREEN
DUAL LAYER DVDRW

32MB GRAPHICS
BLUETOOTH, MODEM

WIRELESS, 10/100 LAN
WINDOWS XP PRO

WAS \$2299
\$2150

LIMITED STOCK ONLY!

ASUS A7DC34DL18PG NOTEBOOK

AMD TURION 64 MT34
1.8GHZ, 1GB DDR, 80GB

17.1" WIDE XGA LCD
WINDOWS XP PRO

ATI RADEON X700 128MB
DUAL LAYER DVDRW

BLUETOOTH, MODEM
1.3MP WEB CAMERA
WIRELESS, 10/100 LAN

HYBRID TUNER
ANALOGUE / DIGITAL TV

WAS \$3199
\$2999

FREE \$50 CARRY BAG!
FREE MOUSE INCLUDED!

BENQ R53uv04 NOTEBOOK

INTEL CENTRINO PM-740
1.73GHZ, 512MB, 60GB

15.4" WIDE XGA LCD
1280X800 RESOLUTION

16MS RESPONSE TIME
INTEL GMA 900 128MB

WINDOWS XP HOME
SUPER MULTI DVDRW

4-IN-1 CARD READER
WIRELESS, FIREWIRE

WAS \$1699
\$1575

FREE \$50 CARRY BAG!

BENQ A33eV22 NOTEBOOK

HOT

INTEL CELERON M380
1.6GHZ, 256MB, 60GB

15.4" WIDE GLOSS LCD
16MS RESPONSE TIME

INTEL GMA 900 128MB
DUAL LAYER DVDRW

WINDOWS XP HOME
WIRELESS 802.11 b/g

WAS \$1249
\$1150

FREE \$50 CARRY BAG!

ASUS E8204WLM1-PRO NOTEBOOK

INTEL CORE DUO T2500
2.0GHZ, 1GB DDR2
120GB SATA 5400RPM

15.4" WSXGA LCD
WINDOWS XP PRO

ATI 512MB X1600 VIDEO
5-IN-1 CARD READER

8X DVD SUPER MULTI
1.3MP WEB CAMERA

BLUETOOTH 2.0, MODEM
WIRELESS, GIGABIT LAN

WAS \$3850
\$3599

\$250 PRICE DROP!

THECUS N2100 NETWORK STORAGE

yes.box
your embedded storage

SERVER STORAGE UNIT
2 X SATA RAID BAYS, 128MB
3 X USB2.0, DUAL G'BIT LAN

MUSIC SHARING SERVER
SUPPORTS ITUNES OR FTP

PERSONAL PHOTO WEB
SERVER
FILE MANAGEMENT &
SHARING

USB DEVICE STORAGE
ONE TOUCH COPY

\$499

SUPPORTS UP TO 500GB
SATA!
BLACK, SILVER OR PEARL

THECUS N2050 PERSONAL BACKUP

yes.box
your embedded storage

HOT

PERSONAL BACKUP UNIT
SATA/RAID 0 / RAID 1
UP TO 3.0Gbps TRANSFER

eSATA or USB2.0
INTERFACE

STORE ALL YOUR MEDIA
1,000,000 PHOTOS
250,000 SONGS

\$269

UP TO 1 TERABYTE
CAPACITY!

BENQ S72V35 NOTEBOOK

HOT

INTEL CENTRINO PM-740
1.73GHZ, 512MB, 80GB

14" WIDESCREEN LCD
8X DVD SUPER MULTI

ATI RADEON X600 64MB
WINDOWS XP PRO

MODEM, LAN, WLAN
4-IN-1 CARD READER

WAS \$2499
\$1950

3 YEAR COURIER PICK UP
AND RETURN WARRANTY!

SHIBA TECRA PTA71A-011003

TECRA A7 ICDP T2300
1.66GHZ 512MB, 60GB

15.4" WSXGA LCD
ATI M56P 128MB VIDEO

DVD SUPER MULTI
WINDOWS XP PRO

BLUETOOTH V2.0
6-IN-1 CARD READER

WIRELESS, FIREWIRE
10/100/1000 LAN

WAS \$2499
\$2275

INTEL CORE DUO CPU!

TOSHIBA PROTEGE PPR20A-020003

INTEL PENTIUM M 753
1.2GHZ, 512MB, 60GB

12.1" XGA LCD
1024 X 768 RESOLUTION

INTEL EXTREME
GRAPHICS
WINDOWS XP PRO

56K MODEM,
BLUETOOTH
WIRELESS, GIGABIT LAN
SD CARD SLOT,
INFRARED

WAS \$3349
\$3199

WEIGHT FROM
1.29KG!

BENQ R31eV08 NOTEBOOK

HOT

INTEL CELERON M370
1.5GHZ, 512MB, 60GB

15" LCD XGA SCREEN
1024x768 RESOLUTION

VIA 64MB SHARED VIDEO
WIRELESS, 10/100 LAN

56K MODEM, DL DVDRW
WINDOWS XP HOME

WAS \$1299
\$1075

FREE \$50 CARRY BAG!
FREE MOUSE INCLUDED!

BENQ S52V54 NOTEBOOK

INTEL CENTRINO 740
1.73GHZ, 512MB, 80GB

13" WIDESCREEN LCD
8X DVD SUPER-MULTI

BLUETOOTH, MODEM
5-IN-1 CARD READER

WINDOWS XP PRO
WIRELESS, 10/100 LAN

WAS \$2399
\$1890

FREE \$50 CARRY BAG!
FREE PORT REPLICATOR!

3 YEAR COURIER PICK UP
AND RETURN WARRANTY!

LIFETIME BELKIN SURGE PROTECTION IN STOCK! **WARRANTY**

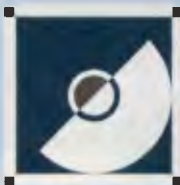
CPU	LCD	BAREBONES	LCD TV
SEMPRON 754 2600+ / 3400+ \$ 105/185	17" BENQ FP71G+S / FP71E+ \$ 325/355	AOPEN SILENTPC \$ 250	ACER 26" WIDESCREEN \$ 1299
AMD 939 3200+ / 3500+ \$ 239/319	17" BENQ FP71V \$ 389	SHUTTLE SN85G4 \$ 430	ACER 32" WIDESCREEN \$ 1699
AMD 939 3700+ / 3800+ \$ 345/435	17" MITSUBISHI DV175 \$ 355	SHUTTLE SB6162V4 SILVER \$ 399	ACER 37" WITH DIGITAL TUNER \$ 3190
AMD 939 3800+ DUAL CORE \$ 469	17" SAMSUNG 740N / 740B \$ 315/379	SHUTTLE SB8365M \$ 560	SAMSUNG 26" 8MS, HDMI \$ 2150
AMD 939 FX-60 DUAL CORE \$ 1625	19" BENQ FP91G+ / FP91V \$ 435/555	SHUTTLE SB87G5 \$ 525	SAMSUNG 32" 8MS, HDMI \$ 3299
AMD 939 X2 4200+ / 4600+ \$ 559/865	19" SAMSUNG 940B BLACK \$ 515	SHUTTLE SB95PV2 \$ 659	SAMSUNG 40" 8MS, HDMI \$ 5399
AMD 939 X2 4400+ / 4800+ \$ 725/970	19" SAMSUNG 940B SILVER \$ 510	SHUTTLE SD31P \$ 699	SONY BRAVIA V 26" 8MS, HDMI \$ 2759
INTEL Celeron 336 (2.8G) / 346 (3.0G) \$ 129/165	19" SAMSUNG 940N / 930BF \$ 430/595	SHUTTLE SN25P \$ 599	SONY BRAVIA V 32" 8MS, HDMI \$ 3449
AMD 939 X2 4600+ / 4800+ \$ 279/340	19" SONY SDMS95FB / SDMS95FS \$ 475	SHUTTLE SN26P **SLI READY** \$ 899	SONY BRAVIA V 40" 8MS, HDMI \$ 4999
AMD 939 X2 4600+ / 4800+ \$ 450/650	19" VIEWSONIC VA1912W \$ 490	SHUTTLE ST20G \$ 550	VIEWSONIC 32" 8MS, HDMI \$ 1775
INTEL Celeron D 805 / 830 \$ 209/445	19" VIEWSONIC VX922, 2MS! \$ 550	SHUTTLE SK21G \$ 325	VIEWSONIC 37" 8MS, HDMI \$ 2799
INTEL Celeron D 930 / 940 \$ 525/685	20" PHILIPS 200W6CS \$ 899	SHUTTLE SD11G5 \$ 649	VIEWSONIC 40" 8MS, HDMI \$ 3650
HDD	PRINTERS/MULTIFUNCTION	PSU / SURGE / UPS	FLASH MEMORY
SEAGATE 120GB 8MB IDE / SATAII \$ 110/120	CANON IP1200 / IP4200 \$ 59/169	ANTEC NeoHE 380W / 430W \$ 119/129	APACER ER151 CARD READER \$ 39
SEAGATE 160GB 8MB IDE / SATAII \$ 110/119	CANON IP5200 / IP8500 \$ 215/499	ANTEC NeoHE 500W / 550W \$ 165/185	APACER 512MB / 1GB CF (100x) \$ 69/115
SEAGATE 200GB 8MB IDE / SATAII \$ 129/135	EPSON PHOTO C67 / C87 \$ 85/125	ANTEC SP2.0 400W / 500W \$ 95/125	KINGMAX 128MB / 256MB CF (40x) \$ 35/49
SEAGATE 300GB 8MB IDE / SATAII \$ 170/190	EPSON PHOTO R370 / R350 \$ 159/289	ANTEC TP2.0 430W / 550W EPS \$ 125/185	TRANSCEND 256MB / 512MB CF \$ 55/69
SEAGATE 400GB 8MB IDE / SATAII \$ 340/375	FUJII XEROX 204A \$ 310	THERMALTAKE W0029 / W0049 \$ 210/235	APACER 512MB / 1GB MMC PLUS \$ 59/99
WD 160GB 8MB IDE / SATAII \$ 115/125	FUJII XEROX C525A \$ 485	THERMALTAKE W0074 / W0084 \$ 225/279	APACER 128MB / 256MB SD (60x) \$ 29/39
WD 320GB 8MB IDE / SATAII \$ 199/210	FUJII XEROX DOCUPRINT C2535A \$ 1975	ULTRA X-CONNECT 500W/-UV \$ 155/169	APACER 512MB / 1GB SD (60x) \$ 69/99
WD 160GB / 250GB RAID EDITION2 \$ 165/185	FUJII XEROX WORKCENTRE 222/228 \$ 499/699	ULTRA X-FINITY 400W / 600W \$ 95/199	KINGMAX 256MB / 512MB SD \$ 39/65
WD 500GB, 7200RPM, SATAII \$ 499	HP LASERJET 1020 MONO LASER \$ 175	BELKIN PUREAV 6-WAY / 8-WAY \$ 99/130	TRANSCEND 128MB / 256MB SD \$ 30/45
WD 74GB RAPTOR, 10K, 8MB \$ 249	CANON PIXMA MP170 / MP500 \$ 160/299	BELKIN GOLD 8-WAY / 8-WAY AV \$ 130/140	TRANSCEND 256MB MINI SD \$ 49
WD 150GB RAPTOR, 10K, 16MB \$ 439	EPSON CX3700 / CX4700 \$ 120/195	BELKIN SUPERIOR 6-WAY 2M/4M \$ 99/110	APACER / FUJIFILM 128MB XD \$ 49/69
WD 150GB RAPTOR X, CLEAR \$ 520	EPSON STYLUS RX510 / RX630 \$ 310/345	POWERWARE 5110 500VA / 700VA \$ 110/139	OLYMPUS 32MB / 256MB XD \$ 29/69



Scorpion Technology
Computers Pty Ltd
Unit 4-5/2, Garden Road, Clayton
VIC 3168
Ph: 1300 726 770
Fax: 03 958 8888
Email: sales@scorpotech.com.au

Open: Mon-Fri: 10am - 6pm
Saturday: 10am - 3pm
Sunday: Closed





CORPSOFT .COM.AU



Online: www.corpssoft.com.au

TollFree: 1300 763 892

Phone: (02) 9725 3700

Fax: (02) 9604 1983

MICROSOFT PRODUCTS

Microsoft Office XP
for Win98/ME/2000/XP

\$99 Standard Upgrade
\$149 Professional Upgrade

Offer ends May 31 - or while stocks last

Access 2003 New Install†	\$275
Access 2003 Upgrade	\$157
Digital Image Suite 2006	\$130
Encarta Reference Library 2006 CD/DVD	\$99
Excel 2003 New Install†	\$275
Exchange 2000 Server Additional 5 CALs	\$500
FrontPage 2003 New Install	\$304
Money 2005 Win98/2000/XP	\$48
Project 2000 New Install	\$550
Project 2003 Upgrade	\$529
Publisher 2003 Upgrade	\$129
Publisher 2003 New Install†	\$220
Publisher 2002 New Install†	\$175

PRODUCTS OF THE MONTH

Xbox 360 only \$499

(Includes: Console, Wireless Controller, 20GB HD, Media Remote, AV Cable & Faceplate)

when you purchase together with any of the following products:

	CorelDRAW Graphics Suite 12 \$489 New Install
	CorelDRAW Graphics Suite X3 \$589 New Install
	OmniPage Pro Version 15 \$799 New Install†
	Adobe InDesign CS2 V4 \$1150 New Install†

More Popular Product Specials-

EndNote Version 9	\$440
Family Tree Maker Deluxe 2006 Aust.Ed.	\$89
FileMaker Pro v8 While stocks last	\$399
FileMaker Pro v8 Upgrade	\$265
Goldmine Contact Manager v5, 1 User	\$110
Goldmine Contact Manager v5, 10 User	\$850
IMSI OrgChart Pro Version 1.3	\$159
McAfee Internet Security 2006	\$95
McAfee VirusScan 2006 1-User	\$65
McAfee VirusScan 2006 3-User	\$88
MYOB Accounting V15	\$239
MYOB Accounting Plus V15	\$459
OmniPage Pro V15 - New Install†	\$799
PC Tools Spyware Doctor 2006 v3.5	\$66
PC Tools Registry Mechanic v5.1	\$66
Pinnacle Studio Plus V10 with Internal PCI Hardware (Analogue+Digital)	\$385
Pinnacle Studio Plus V10	\$175
Pinnacle Studio V10	\$134
QuickBooks Accounting 2006/07	\$229
QuickBooks Plus 2006/07	\$499
Reference Manager V11	\$495
Roxio Easy Media Creator Suite v8	\$135
Scansoft PaperPort V10	\$160

Phone
now on

1300 SOFTWARE

Visio Professional 2003 Upgrade	\$370
Visio Standard 2003 New Install	\$306
Visio Standard 2003 Upgrade	\$140
VisualStudio 2005 Pro Upgrade	\$846
Win XP Professional w/SP2 Upgrade	\$295
Win XP Professional w/SP2 New Install	\$425
Win XP Home Upgrade	\$148
Windows 98 2nd ED Upgrade	\$155
Windows ME Upgrade from Win98	\$75
Win 2000 Server Upgrade +5 CALs	\$999
Word 2003 New Install†	\$275
Word 2003 Upgrade	\$157

Microsoft Office 2000 CLEARANCE

Microsoft Office 2000

\$99 Upgrade
\$225 New Install†

Professional
\$149 Upgrade
\$275 New Install†

POPULAR PRODUCTS

10% OFF
all HP products
from May 5th
until May 18th



See www.corpssoft.com.au for details

ACDSee V8 - New for 2006	\$85
ACT! V8 - New for 2006	\$259
ACT! V8 - Upgrade	\$150
Acronis True Image v9 - New for 2006	\$85
Adobe Premiere Pro v2 Upgrade	\$324
Avid Liquid 7 Standard	\$925
Avid Liquid 7 Professional	\$1855
Corel Knockout 2 + FREE KPT Collection	\$150
Diskeeper Workstation 10 Professional	\$89
Diskeeper Server v10	\$550
Encyclopaedia Britannica 2006 DVD	\$118

ScanSoft PaperPort Professional V10	\$310
ScanSoft PDF Converter V3	\$72
ScanSoft PDF Converter V3 Pro	\$135
ScanSoft PDF Creator V3	\$72
Trend Micro Internet Security 2006	\$85
TypeQuick for Windows Save \$30	\$89
ULEAD PhotoImpact v11 Upgrade	\$105
ULEAD PhotoImpact v11 New Install	\$160
ULEAD Video Studio v9	\$170
VET AntiVirus 2006	\$67
WinZip Version NEW Version 10	\$69
Zone Alarm Security Suite NEW Version 6	\$88

300GB Maxtor External Hard Drive **\$245**

Logitech diNovo Media Desktop Laser
(Bluetooth)
\$265
Save \$85 off RRP

CorpSoft ACADEMIC and HOME USE SPECIALS

Products in blue require Academic ID

Adobe Acrobat V7 Pro Acad/Home Use	\$209
Adobe Acrobat V7 Std Acad/Home Use	\$132
Adobe CS2 Premium Academic	\$540
Adobe CS2 Web Bundle Academic	\$839
CorelDraw Graphics Suite X3	\$149
Corel PaintShop Pro X - v10	\$159

Corel WordPerfect Office X3 Home Ed	\$159
Macromedia Studio v8	\$420
MS FrontPage 2003 Acad/Home Use	\$137
MS OfficeXP Pro Acad/HUse Win98-XP	\$189
MS Office 2003 Pro Acad/Home Use	\$229
MS Office 2003 Student & Teacher	\$186

MS Project 2003 Acad/Home Use	\$98
MS Publisher 2003 Acad/Home Use	\$135
MS Visio Pro 2003 Acad/Home Use	\$215
MS VisualStudio 2005 Acad/Home Use	\$85
MS Win XP Pro Upg. Acad/Home Use	\$120
Quark Xpress Academic V6.5	\$390

• Lowest Prices in Australia – GUARANTEED!!!
IF YOU RECEIVE A GENUINE LOWER PRICE – CALL US AND WE'LL BEAT IT.

The Latest Products at the Lowest Prices!!!



Microsoft Office 2003

Standard Upgrade

\$375

Small Business Upgrade

\$395

Professional Upgrade

\$475

Standard New Install†

\$500

Small Business N/Install†

\$520

Professional N/Install†

\$600

BACK TO SCHOOL SPECIALS

Student & Teacher
3-USER PACK**\$189**

Professional (1-User)

\$225AutoDesk
AutoCAD LT 2007**\$819** Upgrade**\$1950** N/Install**Save \$250**

• Multi-user discounts available • Visit www.corpssoft.com.au for more Adobe specials



Norton AntiVirus 2006

1-User New Install

\$49

5-User New Install

\$125

3-User New Install

\$84

10-User New Install

\$199

Norton SystemWorks Premier 2006

1-User New Install

\$99

5-User New Install

\$210**Save \$51 off RRP**

10-User New Install

\$340

Norton Ghost Version 10

1-User Pack

\$79

5-User Pack

\$300

3-User Pack

\$195

PRICE CRASH



Norton InternetSecurity 2006

1-User New Install

\$75

5-User New Install

\$180

3-User New Install

\$140

10-User New Install

\$340

• Call for Govt. discounts on Adobe/Symantec/Microsoft products



Adobe Photoshop Elements V4

\$145 New Install

Adobe Premiere Elements V2

\$137 New Install

Photoshop Elements V4 and Premiere Elements V2 Bundled

\$219 New Install

Adobe Acrobat v7 Standard & Professional

Standard 1-User

\$469

Professional 1-User

\$705

Standard 2-User (per user)

\$409

Professional 2-User (per user)

\$615

Standard 3-User (per user)

\$369

Professional 3-User (per user)

\$575

Standard Upgrade

\$159

Professional Upgrade

\$250

Adobe Creative Suite V2 Premium

Upd from CreativeSuite

\$935

Upd from Adobe Photoshop

\$1275

New Install

\$1990

Academic

\$550

Adobe CS2 Web Bundle

includes Macromedia Studio 8

New Install

\$2875

Upgrade

\$1445

Academic

\$850

Adobe Production Studio

inc Premiere Pro v2 & Photoshop CS2

Standard Upgrade from

\$809

Premium Upgrade from

\$1049

Premium Academic

\$825

• Visit www.corpssoft.com.au for our full ACADEMIC Price Range

Microsoft VisualStudio 2005



Standard Upgrade

\$302

Standard N/Install

\$455

Pro New Install

\$1125**SAVE \$262**

Wacom Graphire3 4x5 USB Tablet (Silver)

\$70

Cordless mouse optional extra



Dragon NaturallySpeaking Pref. V8

\$289 New Install**\$379** + BONUS Premium USB Headset

Benq 20" LCD Monitor

Widescreen, Fast 8ms

\$695

NEW FOR 2006 Nero Premium Version 7

\$143 New Install

Macromedia by Adobe 2006 Releases

Dreamweaver V8

\$609

Dreamweaver V8 Upgrade

\$315

Studio V8 Upgrade

\$625

Studio V8 New Install†

\$1281

CorelDRAW Graphics Suite 12

Upgrade

\$220

New Install

\$489

See left page for Xbox Special



CorelDRAW Graphics Suite X3

Upgrade

\$266

New Install

\$589

See left page for Xbox Special



Paint Shop Pro Version 10

Upgrade

\$129

New Install

\$190

New version for 2006

† Upgrade bundled with competitive product. PLEASE NOTE: • Delivery: Post \$11.50 or Courier \$15.90 • We accept Bankcard Mastercard and VISA. COD welcome. We accept AMEX with surcharge. • Phone, Fax and Mail Orders Welcomed • Goods ordered in error incur a 15% restocking fee. • We Accept authorised returns for Credit within 10 days if goods are unopened and in saleable condition • Moneyback Offers (if any) are the responsibility of the manufacturer • E & O.E. • All Prices are Subject to Change Without Notice • Images shown are for illustration purposes only • Artwork prepared Apr 12th - prices advertised are GST inclusive. APC 0606

• **Lowest Prices in Australia - GUARANTEED!!!**



CORPSOFT
.COM.AU

Unit 1, 28 Victoria St, Smithfield NSW 2164 • PO Box 6168, Wetherill Park NSW 2164

Phone (02) 9725 3700 • Fax (02) 9604 1983

CorpsSoft.com.au is a division of Corporate Software Australia Pty Limited. ABN 65 003 338 029

CD & DVD DUPLICATION

BUSINESS CARD AND MINI CDs
IN HOUSE MULTIMEDIA, DESIGN,
PRINTING & PACKAGING
DVD AUTHORIZING
ANY QUANTITY



MultipliCD
CD DUPLICATION SERVICES



689 Malvern Rd, Toorak, Vic, 3142
www.duplication.com.au
Email: sales@duplication.com.au
PH: (03) 9827 6588



Bizz Wizz Software

Easy to use for Small Businesses
Bookkeeping, Invoicing and Point of sale Software
DOWNLOAD YOUR FREE TRIAL AT
www.bizzwizz.com.au

3 ALFORD STREET BALCATTA WA 6021 Ph: (08) 93490255



CD & DVD Duplication

Professional Disc Duplication Services
Super fast turnaround / Competitive Prices
Custom Silkscreen Printing on Blank CD-R
Visit our web site for full range of services

 sales@diskmax.com.au

www.diskmax.com.au

DISKMAX (02) 9699 3333



- An audience of active technology buyers
- Authoritative editorial environment for your advertising
- High rates of response for excellent return on your investment

For Advertising Enquiries contact Alex Vella (02) 8268 4662 - avella@acpmagazines.com.au



www.klipsch.com

America's No.1 PC speakers now available in Australia

The ProMedia® GMX A-2.1 and the ProMedia® Ultra 2.0 speakers are designed for consumers who want true high-fidelity sound, but do not have the space for a multi-speaker sound setup. They deliver dynamic sound from any audio source, including iPods, PCs, CD, DVD, and MP3 players, game consoles, laptops, television sets and VCRs.



ProMedia® Ultra 2.0 speakers

The ProMedia® Ultra 2.0 speakers consist of two magnetically-shielded satellite speakers with two-way design that utilizes dual 2.5-inch fibre-composite cone drivers and a 1-inch metallised polymer tweeter. An exclusive Klipsch MicroTrac-trix™ horn is coupled to the tweeter for maximum clarity and efficiency. The woofers are long-throw units powered by unique neodymium motor structures. This audiophile design approach provides rich midrange clarity, extended airy highs and a satisfying bass punch, creating balance throughout the audio spectrum.



ProMedia® GMX A-2.1 speakers

The ProMedia® GMX A-2.1 speakers consist of two magnetically-shielded satellite speakers with two-way design, 3-inch woofers, Klipsch's exclusive MicroTrac-trix® horns, ball joint pedestal mounts that allow the speakers to be aimed securely in almost any direction with just a twist of the hand, subwoofer with 75-watt amplifier, control pod with two stereo inputs: one dual RCA, one 1/8" minijack, superlative dynamic output of 108 dB for music, games, and movies and wide response levels from 30-20,000Hz +/- 5 dB.



Anywhere is a wholesaler and does not sell direct to the public. The above products can be purchased from most independent computer dealers throughout Australia. Call the freecall number below for your nearest reseller.

Anywhere

COMPUTER ACCESSORIES

www.anyware.com.au
www.anywarenz.co.nz

SYDNEY

MELBOURNE

PERTH

ADELAIDE

BRISBANE

AUCKLAND

FREECALL - 1300 ANYWARE: 1300 269 927

Find out more additional products, online ordering and updated prices from

www.computeronline.com.au

COMPUTER PARTS & ACCESSORIES



CPU's	Motherboards	Memory	Video cards	Sound cards
Intel Celeron 2600 775 \$119 Celeron 2800 775 \$132 P4 - 3.0Ghz 800 \$273 P4 - 3.2Ghz 800 \$329 AMD Sempron 2800 754 \$118 Sempron 3000 754 \$135 Athlon 64 3200 939 \$253 Athlon 64 3500 939 \$329 Hard disks Notebook 40Gb \$108 Notebook 60Gb \$150 Notebook 80Gb \$169 7200 RPM WD 800JB 80Gb 8m \$87 WD 1200JB 120Gb 8m \$110 WD 2000BB 200Gb 8m \$128 WD 2000JS 200Gb 8m \$144 Maxtor 120Gb 8m \$110 Maxtor 160Gb 8m \$125 Maxtor 200Gb 8m \$139 Seagate Barracuda 40Gb \$74 Barracuda 80Gb \$83 Serial ATA 80Gb 8m \$95 Barracuda 120Gb \$113 Barracuda 120Gb 8m \$119 Serial ATA 120Gb 8m \$111 Barracuda 160Gb 8m \$129 Serial ATA 160Gb 8m \$133 Barracuda 250Gb 8m \$157 MS Software Windows XP Home \$129 Windows XP Pro oem \$209 Windows XP Pro Up Ac \$118 Windows XP Pro X64 \$219 Windows Media Center \$179 Office 2003 Basic \$239 Office 2003 student \$199 Office 2003 Pro Ac Ed \$219 Office small bus 2003 \$339 Office Pro 2003 oem \$439 CD & DVD Roms 52x CDROM \$25 DVD 16x Samsung \$39 DVD 16x Sony/Liteon \$39	Pentium 4 Gigabyte 8S661FXM775\$85 Gigabyte 8I848775-G\$105 Gigabyte 8S648FX775\$85 Gigabyte 8I915GMF \$155 Gigabyte 8I915GDuo\$169 Gigabyte 8I915P Duo\$147 Gigabyte 8I945G \$188 Gigabyte 8VM800PM\$82 Gigabyte 8N-SLI \$171 Gigabyte 8IPE775 G \$129 Gigabyte 8IG1000-G\$112 Gigabyte 8S661FXMP\$84 ASUS P4S800-MX-SE \$85 ASUS P5P800-MX \$89 ASUS P5GPL \$145 ASUS P5SLD2-VM \$166 ASUS P5WD2-E Prem \$359 ASUS P5S800-VM \$85 ASUS P5N32-SLI Deluxe \$329 Elitegroup 661GX/800\$79 AMD Athlon / Duron Gigabyte K8NS \$99 Gigabyte K8NSC-939\$119 Gigabyte K8NF-9 \$159 Gigabyte K8NSLI \$159 Gigabyte K8NS U 939\$159 Gigabyte K8U \$82 Gigabyte K8U 939 \$97 ASUS A7S8X-MX \$90 ASUS A8N-E \$159 ASUS A8N-VM CSM \$148 ASUS A8N-SLI \$179 ASUS A8N-SLI Prem \$269 ASUS A8N32 SLI Delu \$329 Add-on card USB 2.0 4 port PCI \$25 Firewire card 3 port \$30 Firewire PCMCIA \$45 PCI Ultra ATA 133 \$39 Leadtek TV2000XP RM\$49 Leadtek TV Expert \$79 Leadtek TV DV2000 \$105 Leadtek DTV1000T \$99 Leadtek TV USB II DE \$131 COMBO TV DVE-T300\$128 USB blue tooth \$39	Call for the latest prices 256M pc133 \$49 512M pc133 \$99 256M DDR 3200 \$35 512M DDR 3200 \$59 1G DDR 3200 \$129 512M DDR2 4200 \$59 1G DDR2 4200 \$119 KINGMAX 256M DDR 3200 \$42 512M DDR 3200 \$75 1Gb DDR 3200 \$149 Corsair DDR 1G TwinX \$140 Corsair DDR 512 TwinX \$77 Corsair DDR2 1G 4200\$145 Kingston DDR 1G kit \$139 Kingston DDR 512 kit \$79 Geil DDR 1G \$149 Geil DDR 512M \$75 Geil DDR 256M \$45 Notebook memory 256M pc133 \$69 256M DDR 2700 \$49 512M DDR 3200 \$79 1G DDR 3200 \$199 CompactFlash Memory 256M CompactFlash \$39 512M CompactFlash \$59 1G CompactFlash \$89 2G CompactFlash \$149 Secure Digital Memory 512M Secure Digital \$59 1G Secure Digital \$89 xD Memory 256M / 512M xD \$69/\$99 1G xD \$149 USB Flash drive USB drive 256M 2.0 \$29 USB drive 512M 2.0 \$49 USB drive 1G 2.0 \$79 USB drive 2G 2.0 \$129 USB card reader 23 in1 \$24 Removable Storage Floppy drive \$20 External box 2.5" USB \$25 External box 3.5" USB \$39 External box 5.25"USB\$49	ASUS Asus ATI A9550 128M AGP \$79 Asus ATI A9550 256M AGP \$99 Asus 6200 256M AGP \$209 Asus 6200TC 64M share to 256mPCI-X \$99 Leadtek A340TD 256M AGP \$99 Leadtek PX6200 128M PCI-X \$99 Leadtek A6600GT 128M AGP \$229 Leadtek PX6600TD 256M PCI-X \$199 Leadtek 6800GS 256M PCI-X \$319 ATI Radeon ATI Radeon Powercolor 9250 128M PCI \$96 ATI Radeon GeXcubeX700Pro 128M AGP\$249 ATI Radeon Gigabyte 6600LE 128M PCIX \$144 ATI Radeon Gigabyte 6600 256M AGP \$199 ATI Radeon Gigabyte 6600GT128M PCI-X\$209 ATI Radeon Gigabyte 6600GT256M PCI-X\$249 ATI Radeon Gigabyte 7800GT256M PCIX\$539 ATI Radeon Gigabyte 5200 128M DVI \$58 ATI Radeon Gigabyte 9250 128M DVI \$55 ATI Radeon Gigabyte 9550 256M DVI \$99 ATI Radeon Gigabyte 9600 Pro256M DVI\$129 ATI Radeon Gigabyte X300SE128M PCIX \$79 ATI Radeon Sapphire 9250 256M \$75 CD Rewriters / DVD writers Sony CRX230E 52x32x52 IDE drive oem \$39 Sony CRX320E 52x32x52 16x DVD oem \$59 Liteon 52x32x52 IDE kit \$39 Liteon 52x32x52 USB external kit \$89 Liteon 52x32x52 16xDVD USB external kit \$109 Liteon 52x32x52 16xDVD Combo \$55 Liteon SHW-160P6S DVD burner oem \$72 Samsung SM-252FRNS 52x32x52 \$39 Samsung SM352BRNS 52x32x52 16XDVD \$55 Samsung DVDRW Dual Layer 16XDVD \$69 Samsung DVDRW USB 16XDVD Ext \$145 LG GCE 8525B 52x32x52 IDE oem \$39 LG GCC-4520B 52x32x52 16X DVD \$55 LG GSAH10A DVD 16x burner \$69 Pioneer 111D DVD burner oem \$75 Sony DRU810A 16x Dual Layer \$99 Sony DRX810UL 16x Dual Layer USB \$189 ASUS DRW1608P2S DVD burner \$69	CREATIVE Sound Blaster 5.1 \$37 Audigy Value \$59 Live 24 bit USB Ext \$83 Audigy 4 \$125 Networking NIC 10/100Mb \$12 5 port switch 10/100 \$29 8 port switch 10/100 \$39 Netgear WGR614 \$85 56k internal Modem \$20 Netcomm NB1300+4 \$75 Netcomm NB1300+4WS\$79 NetcommNB5 \$79 Netcomm NB5Plus4 \$99 NetcommNB5PLUS4W\$135 NetcommNB600W \$119 NetcommNB620W \$185 Netcomm LSV40 VoIP \$59 Netcomm V300 VoIP \$159 Netcomm V100LS VoIP\$99 Netcomm HomePlug \$139 Netcomm V85 VoIP \$149 D-Link DSL-504T \$93 D-Link DSL-G604T \$130 Netgear DG834a \$139 Monitors 17" LCD LG L1750SQ \$339 17" LCD LG 1717S \$319 17" LCD Benq FP71G+ \$329 19" LCD Benq FP91G+ \$420 17" LCD Viewsonic \$329 19" LCD Viewsonic \$420 Cases / Power supply ATX midi case \$65 ATX Macase KA380 \$145 ATX Macase KA-6c28\$120 ATX Macase KA-747 \$129 Antec Sanata II \$185 Antec Super Lanboy \$175 ATX Power 300w \$40 Antec Truepower 430\$109 Antec Truepower 480\$125 Antec Truepower 550\$165

COMPUTER SYSTEMS

Configure your own computer on www.computeronline.com.au

Intel Ultra	AMD Gamer	Intel Value	Speakers	Keyboards
- Gigabyte motherboard 512m PC3200 DDR 80Gb 7200rpm HDD - Panasonic FDD 128m GeForce 4 FX5200 3D sound 16x DVD Rewriter 17" LCD monitor - Subwoofer speakers - Midi deluxe ATX case - Microsoft Multimedia K/B - Microsoft optical mouse Celeron 2600 \$969 P4 3.0G \$1119 P4 3.2G \$1179	- Gigabyte motherboard 512m PC3200 DDR 80Gb 7200rpm HDD - Panasonic FDD 128m GeForce 4 FX5200 3D sound 16x DVD Rewriter 17" LCD monitor - Subwoofer speakers - Midi deluxe ATX case - Benq Win98 keyboard - Microsoft Intellimouse & pad Athlon 64 3500 \$1199 Athlon 64 3700 \$1269	- Pentium 4 motherboard 256m PC3200 DDR 80Gb 7200rpm HDD - Panasonic FDD 32M video built-in 3D sound card built-in 16x DVD Rewriter - Midi deluxe ATX case Celeron 2600 \$459 Pentium 4 3.0G \$629	240w SPKs \$15 400w SPKs with Sub-woofer \$25 Logitech X-230 2 point Spks \$65 Logitech X-530 5 point Spks \$95 Logitech Z-5500d 5 point \$479 Creative SBS260 2point Spks\$27 Creative SW390 2point Spks\$55 Creative Inspire 2500 2 Spks\$65 Creative Inspire 5200 5 Spks\$105 Altec Lansing 2221 \$84 Altec Lansing 2220 \$58 Mice Optical mouse \$15 Logitech G5 \$95 Microsoft Intellimouse PS/2 oem \$15 Wheel optical oem \$24 Intellieye oem \$39	Benq PS/2 \$16 Microsoft multimedia \$30 Microsoft wireless optical \$85 Microsoft remote k/b \$98 Microsoft digital media pro \$45 Microsoft Natural 4000 \$65 Logitech Cordless Recharge\$98 Logitech Cordless S510 \$99 Logitech Cordless Desktop \$57 Webcam Logitech QuickCam IM \$63 Logitech QuickCam SPHERE\$185 Logitech QuickCam Pro 4000\$118 MP3 Creative 6GB Zen Neon \$279 Creative 8GB Zen Micro \$352 Creative 1GB MuVo TX FM \$215 Creative 1GB MuVo Slim \$210 Creative 512M MuVo TX FM \$145



Mambo

P/N: VC2000BNS

The most affordable Thermaltake case to date!

Only RRP \$99

Purchase a Mambo case and receive a Thermaltake X-Tunner InfraRed fan controller absolutely **FREE***



Features

- Detachable front panel design.
- Fits standard ATX motherboard.
- Dual 120mm front and rear fan (front is optional).
- Screw-less for easy installation.
- Dual USB2.0, Audio and speaker ports.
- Drive bays: 5.25" x 4, 3.5" x 2 (external); 3.5" x 5 (internal).
- Power supply not included. See below for more information.



Available for installation in your Mambo Case

Thermaltake 430W Power Supply ATX 12V 1.3 P/N: W0084

Features

- Support 6-pin PCI-Express, S-ATA and 20+4 pin detachable main power connector.
- Dual fan design provides best air-flow to cool your PSU components.
- Protections against Over Power, Over Voltage, Short-Circuit, and Protection Reset.
- Safety / EMI Approvals: FCC, UL, CUL, CSA, and CE certification.

RRP \$59



Thermaltake Golden Orb II CPU Cooler P/N CLP0220

Features

- Designed for AMDK8 + Intel LGA 775.
- Includes golden aluminium fins.
- Silent fan with blue LED light, 17dB only.
- Pure Copper Base.

RRP \$49



 **Thermaltake**
COOL// YOUR LIFE
www.thermaltake.com.au

To redeem your prize, send your proof of purchase, along with a copy of this ad, your name, address, phone number and place of purchase to:

1/49 Henderson Rd, Rowville VIC 3178

*Offer valid for first 100 purchases.

All prices are RRP and are subject to change

Quality Inkjet Cartridges-ISO 9001 Certified - Fr \$4.50

Canon Comp Inkjet :

BCI-15BK/15C	\$ 5.50/\$6.50
BCI-16C <i>New</i>	\$ 12.00
BCI-24/21BK	\$ 4.50
BCI-24/21C	\$ 5.00
BCI-3eBk	\$ 5.50
BCI-3eC/M/Y/PC/PM	\$ 5.00
BCI-6 Bk/C/M/Y/PC/PM	\$ 5.00
BCI-6 G/R	\$ 5.00
BC-02/03/BX-3	\$ 27.00

HP Rem Inkjet :

51629A (#29)	\$ 24.00
51645A (#45)	\$ 22.00
51649A (#49)	\$ 26.00
C1823D (#23)	\$ 28.00
C6578D (#78)	\$ 28.00
C6614D (#20)	\$ 22.00
C6615D (#15)	\$ 22.00
C6625A (#17)	\$ 28.00
C6656A(#56)/C6657A(#57)	\$24/\$32
C8727A(#27)/C8728A(#28)	\$25/\$28



12 x Canon BCI-3 & 6 series
at your choice = \$55
10 x BCI-24 series = \$40

1 set of T0491 - T0496 for \$40

2 sets Brother LC-47 or 800 series
for \$50

Epson Comp Inkjet :

T050/T051/T052/T053	\$ 5.00/\$8.50
T007/008	\$ 8.00/\$10.00
T026/T027	\$ 8.00/\$10.00
T028/T029	\$ 8.00/\$10.00
T038/T039	\$ 8.00/\$10.00
T0321-T0324	\$ 7.50 ea
T0422-T0424	\$ 7.50 ea
T0461-T0474	\$ 7.50 ea
T0491-T0496	\$ 7.50 ea
T0561-T0564	\$ 7.50 ea
T0540-T0549	\$ 7.50 ea
T0621-T0634	\$10.00/8.80
T-5591 - T-5596	\$ 9.00 <i>New</i>

Brother Comp Inkjet:

LC800 Bk & Colour	\$ 7.50/\$7.00
LC 47 Bk & Colour	\$ 7.50/\$7.00
LC 21 Bk & Colour	\$ 7.50/\$7.00
LC 04 Bk & Colour	\$ 7.50/\$7.00
LC 02 Bk & Colour	\$ 7.50/\$7.00

Free delivery for orders over \$60 Laser Toner-Std \$10 Del fees apply

Laser Toner Cartridges-Rem (HP/Canon) :

C3906A / Canon-EPA	\$ 50	C4096A / Canon-EP-32	\$ 62
C4092A / Canon-EP-22	\$ 50	C4129X / Canon-NP-62	\$ 85
C4127X / Canon-NP-52	\$ 75	Q2612A	\$ 60
C7115X / Canon-EP-25	\$ 60	Q2613A	\$ 60
Q2624A	\$ 60	FX3	\$ 60



Contact us for Wholesale Prices

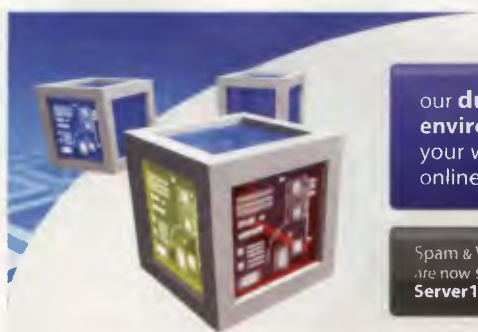
sales@valueprint.net.au

ValuePrint Centre

P.O.Box K901, Haymarket NSW 1240

Tel : 02-9587 4142 Fax : (02)-9882 0952

Issue 06/06



a trusted,
established &
mature webhosting
company...

Would you like to establish a website
for your organisation? Do you feel
unsure what questions to ask, or
where to begin? Or maybe you
already have a website and wish you
could get more from your hosting
provider?

If you want honest and professional
advice about your online needs —
call **Server101** today.

our **duplicate hosting
environment** ensures
your website stays
online... **always.**

Spam & Virus filtering
are now standard on all
Server101 hosting plans!



Server101 is a well established
Australian company providing web
services to thousands of businesses
in Australia and around the world.

Call Server101 today and find out
how we can improve your web
presence.

www.server101.com
(07) 38 766 101

Server101
WEB HOSTING

- Lvl 12 / 301 Coronation Drv Milton
- PO Box 1508, Milton BC Qld. 4064
- ph: (07) 3876 6101
- fax: (07) 3876 3101
- email: sales@server101.com

eCommerce

from only
\$28.30
per month

Featuring:

- Easy to use
- Fully customisable
- User friendly store management console
- Secure server
- Payment gateway compatible
- FREE trial periods

Web Hosting

from only
\$14.60
per month

Featuring:

- 140 Mb of space
- 100 emails
- FREE setup
- FREE anti-spam & anti-virus filtering
- Frontpage support
- php/MySQL

Domains

com from only
\$30.00
per year

Featuring:

- Fast registrations
- FREE transfers
- Free renewal reminders
- SAVINGS \$\$

- eCommerce
- web hosting
- dedicated servers
- domain registration
- partner programs
- search engine marketing

web solutions for
your business

top 10 reasons
why you should
host with
Server101

Friendly Support
Value for Money
Maximum Reliability
Speed
Security

Programming Services
Money Back Guarantee
Partner Programs
Integrated e-Commerce
Spam & Virus Filtering

Innovative • Unique • Interesting • Hard to find products



**Pentium 4
with ISA
Now supports
LGA 775 CPUs!**

This industrial motherboard is based on the Intel i915G chipset. It supports LGA 775 Pentium & Celeron processors.
Cat 17096-1 \$699

**Cordless Bluetooth
Barcode Scanner**



HOT PRICE

This cordless CCD scanner uses Bluetooth technology for reliable & accurate performance. Comes with Bluetooth dongle. Requires AA batteries (not included)
Cat 1008178-1 \$599

**PCMCIA Dual
Slot for PC**



This Dual Slot PCMCIA adapter for PC allows a PCMCIA device to be used in a PC. The two built-in PCMCIA sockets in the 3.5" front Drive Unit connect to the PCI Interface Card.
Cat 6482-1 \$199

**LCD Picture
Frames**



Simply take the memory card out of your camera and place it in the built-in memory card reader and setup a slideshow of your favourite pictures.
Cat 4717-1 8in \$699
Cat 4716-1 10.4in \$829

12v Mini PC



This mini barebones PC is based on the VIA Eden 800Mhz processor and motherboard. It can operate on 12v or 240v making it ideal for use in boats or cars.
Cat 1167-1 \$750

USB VGA Adapter



Plugs into a USB 2.0 port and allows the user to extend their desktop over two screens (or three screens if already using a dual head video card).
Cat 15156-1 \$179

**Bluetooth
Headset -
Pendant Style**



Cat 11916-1 \$89

**FireWire 800
Card**



This PCI card supports both FireWire A and the new B with speeds up to 800Mbps.
Cat 2997-1 \$99

**USB to
5.1 Sound**



Perfect for use on a PC or Notebook. Has a 3.5mm and SPDIF connection.
Cat 23025-1 \$59

**Barcode
Scanner**



A great value robust scanner, perfect for retail and warehouse applications.
Cat 8698-1 \$169

**Compact Flash
to IDE Adapter**



Fits in a 3.5" bay and makes any CF card appear as an IDE device.
Cat 6741-1 \$99

**PCMCIA
to Serial**



Add two serial ports to your notebook.
Cat 2726-1 \$269

RFID Controller



Suitable for RFID security applications. RFID readers, electronic door locks, alarms, can all be attached to this unit.
Cat 1008079-1 \$179

**Keypad
with LCD**



An 18 key keypad with LCD display and a serial connection to the PC.
Cat 1008168-1 \$79

What's New?

Temperature Logger

The Temperature Logger comes in two pieces, one being the reader and software and the other is the Sensor Tags. You can use multiple tags with the one reader, the reader and software can be installed on multiple machines. The tags themselves have a similar face size to a credit card. They can log temperatures from -40 to +85 and store up to 8000 readings. The logging interval can be changed from 1min to several hours. Once the data is loaded into the software it can be saved and graphed etc or even exported to Excel or Word.
Cat 18211-1 Reader + Software \$175
Cat 18210-1 Tags \$69



Remote Power Switch

The Remote Power Switch (RPS) is an IP based, Web Controlled, AC power switch. Anyone with a web browser can access it to perform power On, Off or Reboot (timed power shutdown). The RPS is password protected for security. The unique Auto-Ping feature allows your RPS to monitor any IP device on the network and take automatic action whenever the device is down. The unit can be configured to ping a local device and automatically reboot if there is no response or it can be used to ping a remote host to monitor a communications channel and reboot the local modem if there is no response from the remote end etc.
Cat 8558-1 \$499



**Programmable
"Macro Stick"**



16 programmable keys that store up to 1000 keystrokes.
Cat 15131-1 \$199

**Cardbus Gigabit
Adapter**



Upgrade your laptop LAN connection with this easy to install 10/100/1000 card.
Cat 11465-1 \$65

**FireWire
External Case**



Suits a 2.5" laptop style HD.
Cat 6659-1 \$49

**Broadband
Video Phone**



Connect a standard telephone and TV to the VideoPhone, plug it into your Internet connection and you are ready to conduct real-time videoconferencing!
Cat 10181-1 \$449

**High Definition
Video Switch Box**



3 in, 1 out. Component Video with Stereo and Optical Audio.
Cat 23032-1 \$99

• Normally delivered next day •
Not sure what product
you require?

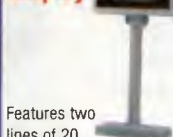
Call us for friendly advice!

ask@mgram.com.au

1800 625 777

www.mgram.com.au

**POS Customer
Display**



Features two lines of 20 characters that are 11.25mm high. Serial Connection.
Cat 8728-1 \$359

USB 2.0 TV Box



Watch TV and Listen to FM radio on your PC or Laptop. Also supports capture from an RCA or S-Video input.
Cat 3527-1 \$169

Dual ADSL Router



Enhance reliability and double your ADSL capacity by using two different ISP's.
Cat 10145-1 \$199

**16 Way
KVM Switch**



This rack-mountable switch allows one console to control up to 16 PC's.
Cat 11657-1 \$799

MicroGram

Reseller
inquiries
welcome

1800 625 777

ask@mgram.com.au

www.mgram.com.au

All prices subject to change without notice. For current pricing visit our website. Pictures are indicative only.

When it comes to communicating are you **STUCK IN THE DARK AGES?**



SEND YOUR MESSAGE... *THE MODERN WAY*

CD/DVD **Duplication** Tower

- **FAST** Copy 1 or up to 11 CDs/DVDs at once
- **EASY** Just load up with CD/DVDs and press "Go"
- **ACCURATE** Exact image copies with verification
- **SIMPLE** No PC required. Compact and fully standalone



Powered By: **WINPOWER DIGITAL**



Make multiple copies & backups of your CD's & DVD's just like a photocopier



- **Automatic Duplication System**
- CDR and/or DVDR
- Reliable robotic system
- 1 to 1000 disc automatically duplicated



- **Auto Disc Printers**
- Thermal or Inkjet printing
- B&W or Full colour
- 1 to 300 disc automated printing



- **Packing Machines**
- Jewel case insertion
- Disc Sleeve insertion
- Security case wrapping
- Packing Services



- **Optical Media**
- CDR, DVDR
- 12cm, 8cm, & business cards
- Shiny silver top, inkjet or thermal printable
- Top quality brand at wholesale prices



- **Disc Packaging Accessory**
- Traditional CD & DVD cases
- Durable Mailer Cases
- Disc sleeves – PVC, paper and more

■ **Rental & Leases Available** ■

CAPAX
TECHNOLOGY

Capax Technology Pty Ltd on PH: (02) 9648 4977 or visit www.capaxtech.com.au
Unit 3 / 103 Derby Street Silverwater NSW 2128

BUYERS GUIDE

CITY SOFTWARE
Black Tie Service, Plain Wrap Prices*



2006
May-June

Hardware :: Software :: Supplies :: Books :: Games

Watch the world cup in HDTV on your PC at work or home!

- Dvico Fusion USB Digital TV Tuner
- Decode and view Digital Terrestrial Television
- USB 2.0 high speed compatible
- Real Time Digital Video Recording (DVR)
- Hi-res still image capture
- HD (MPEG2) to DVD/MPEG4 (Divx) conversion
- Convertible Aspect Ratio (16:9 or 4:3)
- USB remote control included
- Time-Shifting



HOT PRICE

\$179

Save **\$146**

WebCode: DVC0013

Receive a **FREE** exclusively designed World Cup Soccer Ball with every purchase*

See page 25 for details

www.csw.com.au

New Quicken has arrived! ...36 & 37

Get the latest Quickbooks Plus, Pro and Premier. Quicken releases the 2006/2007 range.

Brand New Book Range!43

Brand New Book Range! Geek your ride, Go wild & Build the ultimate PC!

Do you have an extreme lifestyle?.....42

Olympus has a new shock proof and water proof Digital camera for you

Home Stereo has been re invented with apple's New iPod Hi-Fi45

Fill your home with sound with Apple Hi-Fi

WIN a Digital Home Entertainment System



Microsoft Xbox 360 Promotion

See the Back page for details

Worth Over \$7300

Tom Tom One Bundle

Your first step in car navigation!.....8



NEW

\$829

Save **\$150**

WebCode: TOM0090

Norton Internet Security 2006 Price Drop!

Lowest price ever!38

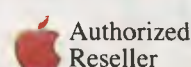
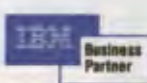


HOT PRICE

\$79

Save **\$50**

WebCode: SYM9689



Are you looking for a better deal?

The SmartBuy club is the answer! Every time you make a purchase*, in store, online or over the phone, Smart Buy Club members receive a 3% rebate redeemable on their very next order!

Benefits of the SmartBuy Club Include:

- Reward certificate valued at 3% of purchase, every purchase!
- Special product promotions offered exclusively to members only.
- Updates on the latest news on the latest products!
- New Feature: Claim your rebates online!

For full details and to apply online, visit www.csw.com.au/smartbuy or call us on 1300 658 600.

smart
BUY
club
3%
rebate

Are you a loyal
City Software
or eStore
Customer?

*Conditions apply

Why pay full price up front and restrict your cash flow?

If you're in business, RentSmart is the cash flow friendly way to finance all the equipment you need, whilst giving you the flexibility to ensure you can keep up to date with the latest technology.

Why RentSmart is the clever way to get the IT you need into your business...

- Save Your Money
- Tax Deductible
- Get everything you want today
- Always have the latest equipment
- Spread the cost
- No deposits or balloon payments
- Easy accounting
- Protect your business
- Easy End of Term Options
- Approval in minutes

In Summary – Why Not Keep Your Cash Flowing!

By choosing to RentSmart, you can improve your cash flow by paying low-cost monthly rentals that may be fully tax deductible; it stays off your balance sheet; and keeps your working capital working for you in better ways rather than tied up in rapidly depreciating technology.

Go to www.csw.com.au/rentsmart for more information



UP TO **5** Year Extended Warranty

Why extend a product warranty?

For most people, computers are the most utilised possession they own. Just like a car, what happens if it breaks down?

Fact: 1 in 3 systems WILL break down in the first 3 years.

Did you know that it's more expensive to repair a computer system than to purchase a United Warranty in the first place?

An extended warranty upfront means:

- No hidden costs of any kind. Parts & Labour are completely covered.
- Service agents nationwide covering 98% of Australia, so if you move you are still covered.
- Complete Peace of Mind
- Unlimited hardware break-downs
- On-site repairs (in your office or home)
- 1800 free-call for any system faults & questions
- Money back Guarantee

Speak to one of our team about the extended warranties available to you!

1300 658 600

united
Extended Warranties

See page 2
for
details



Did you know that you can get
up to 3% rebate on every order?
www.csw.com.au/smartbuy

Index of Hardware Manufacturers

Acer.....4	D-Link.....13	I-Rocks.....27, 45
Altec Lansing.....45	Dvico.....25	Klipsch.....27
Apple.....45	Engin.....14	Kodak.....17, 19, 42
Aten.....9	Epson.....18, 19, 21	Konica Minolta.....19
Avid.....25	Eten.....8	Lexmark.....17
Belkin.....12	Excel.....16	LG.....6
BenQ.....7	Fuji Xerox.....19	Linksys.....14
Blueant.....8	Fujitsu.....7, 17	Logitech.....5, 23, 45
Canon.....5, 19, 20, 21, 42	GMW.....6, 9	Magikleen.....18
Century Cd.....16	Hauppauge.....24	Maxtor.....26
ClicknGo.....18	HP.....5, 8, 16, 19, 21	MGE.....10
Compro.....27	I-Mate.....8	Microsoft.....5, 24
Comsol.....11, 24	Imation.....10	Navman.....8
Creative.....20, 45	Iomega.....22	Netgear.....15

New Magic.....24	Synology.....25
Nikon.....42	Tandberg.....10
Nokia.....22	Tom Tom.....8
O2.....8	TP-Link.....27
Olympus.....42	Verbatim.....15, 20
Palm.....8	Vthree.....21
Panasonic.....17	Wacom.....32
Pinnacle.....25	Welland.....27
Plantronics.....27	Zvue.....45
Roku.....21	
Samsung.....7, 21, 45	
Sandisk.....22	
Sennheiser.....20	
Sony.....42	

Index of Software Manufacturers

ACACT!.....32	Crystal.....34	MAC Software.....46	Nero.....45	Roxio.....43
Adobe.....30, 31	Dantz.....41	Macromedia.....30, 31	Network Associates.....41	Scansoft.....33
Apple.....46	Dragon.....33	Manacomm.....43	Norton.....38	Sony.....44
Autodesk.....28	Extensis.....46	MAUS.....34	Nuance.....33	Symantec.....38
Books.....31, 43, 46	Filemaker.....34	McAfee.....41	Pinnacle.....44	Total Training.....30
Business Objects.....34	Games.....47	Microsoft.....39, 40	Quark.....32	Trend Micro.....43
Corel.....29	Jasc.....29	MYOBS.....35	Quicken.....36, 37	Ulead.....44

Why you get a better deal:

- Express pick up counters mean a lower cost operation than retail - *saving you money*
- Smart online ordering and express pick up - *saving you time*
- A knowledgeable, friendly and reliable team - *serving you better*

Dedicated Account Management

CSW is the corporate, Government & Educational sales division of City Software offering end to end IT product and professional services solutions. For a "Vendor Neutral" appraisal of your IT needs speak to our team of specialists today.

CALL: 1300 761 761



Freight Policy

City Software are committed to giving you the best possible service, at the best possible prices. This goes right down to our freight costs as well. We try to provide the best shipping rates available, and do this by working with our courier partners to get you the best price possible. To calculate your shipping you can use our online calculator, available either in our shopping cart or alternatively at www.csw.com.au/freight



Fast, reliable delivery. Australia's best prices. Friendly, personal service.



Mt Waverley Pick Up Point

Mt Waverley, VIC
Unit 103-105, Axxess Corporate Park
45 Gilbey Road
Tel: 1300 658 600
Fax: 1300 658 010
Email: sales@csw.com.au



Melbourne Pick Up Point

Melbourne, VIC
Shop 3
222 Latrobe Street
Tel: 03 9250 6900
Fax: 1300 658 010
Email: melbournecity@csw.com.au



North Sydney Pick Up Point

North Sydney, NSW
Shop 7-8, 111 Pacific Hwy
(Cnr Walker Street)
Tel: 02 9455 5900
Fax: 02 9957 1854
Email: sydneysales@csw.com.au



Lane Cove Corporate Office

Lane Cove, NSW
Building F, Unit 8A Lane Cove Business Park
16 Mars Rd
Tel: 1300 761 761
Fax: 1300 658 010
Email: nswcorporate@csw.com.au

Open Hours

Mt. Waverley, VIC
8.30am to 5.30pm,
Monday to Friday
(Except Wednesday
9.00am to 5.30pm) AEST.

North Sydney, NSW
8.30am to 6.00pm,
Monday to Friday AEST.

Melbourne, VIC
8.30am to 6.00pm,
Monday to Friday
10.00am to 4.00pm,
Saturday AEST.

Terms & Conditions

Product Information:- All prices include GST and are listed in Australian Dollars only. All 'Save' prices are calculated from the Recommended Retail Price at the time of printing. Only official Australian versions listed. All pictures in this catalogue are for illustration purposes only. Actual product may vary from picture. Because of the dynamic nature of this industry, prices, versions, product details and availability are subject to change on a continual basis without prior notice. Errors and omissions excepted. Goods ordered by fax or post will be charged at the current price on the day of receipt. For out of stock items, delivery dates given are only estimates. Orders:- All orders are subject to our full terms and conditions of sale. If you would like to see a copy of our terms and conditions of sale prior to purchasing, please call our customer service department. Rental Finance:- Finance is available for hardware items over \$500. Figures based on 36 month continuous term and include GST and stamp duty. RentSmart is available to approved customers on selected products. Academic Availability:- When purchasing academic, educational or government

licensed product, it is a requirement of the manufacturer that proof of student enrolment or employment from an educational institution or government department is supplied. Credit Accounts:- Credit accounts are available to clients who intend to spend in excess of \$1000 incl GST per calendar month. Credit applications and any other paperwork that may be required to establish credit must be filled out by all organizations, signed and returned by post or fax (excluding Government departments). City Software reserves the right to refuse or withdraw credit facilities without notice. International Orders:- For international orders please call customer service on +61 2 9700 8800. Payment by cheque or direct deposit only. Insurance for delivery of goods is required for all international orders. Warranty & Returns:- Goods are not supplied on a trial basis, please check specification and compatibility with the manufacturer prior to purchasing. Although our staff can offer advice, they cannot confirm product compatibility and functionality. Return or exchange of computer hardware and/or software will gladly be accepted if the product is faulty

or defective. In some cases, returns or exchange may involve you dealing with the manufacturer directly. If, within 14 days of purchase, but before opening the product and providing it is unmarked, you decide the product is unsuitable please call us to arrange a returns number. A restocking fee of up to 25% may apply to returned goods. Right of refusal for the return or exchange of products is at our discretion, except where the Trade Practices Act of Australia makes allowance. Where the plastic seal on a software item is broken and the goods are neither faulty nor defective the return or exchange will not be accepted. Return or exchange of computer hardware will attract stricter guidelines based upon third party constraints. Confirm prior to purchasing as to whether a computer hardware item is returnable, exchangeable or firm sale. We do not accept non-faulty returns on PCs and servers, notebooks, handhelds, hard drives, CPUs and memory. All products sold are covered by manufacturers warranties.

eStore is a City Software company - ABN 11054 615253.

CAN THE DEAL GET BETTER?

Call 1300 658 600 or visit: www.csw.com.au as prices may change due to the daily fluctuations and online discounts. Save price is calculated off the RRP.

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 3 Year Warranty

Wireless Presentation Gateway

The WP100 connects directly to existing projectors and enable PCs with WLAN, to wirelessly project screen images of applications running on PC and play audio files. The impressive Wireless Presentation Gateway enables mobility, productivity and efficiency through Ease of use in a conference room.



Our Price **\$330** Save **\$45**
WebCode.....AC0069

Acer PD322 Ultra Portable Projector

- Projection System: DLP technology
- Resolution: Max SXGA (1280 x 1024)
- Aspect Ratio: 4:3 (native), 16:9
- Brightness: 1600 Ansi Lumens
- Contrast Ratio: 2000:1
- Projection Screen Size: 31.7" to 300"
- Lamp Life: 4,000 hours
- Weight: 1 Kg.



Our Price **\$2599** Save **\$400**
WebCode.....ACPS012

Acer PD125D Projector

- Projection System: DLP technology
- Resolution: Native: XGA (1,024 x 768) Maximum: SXGA (1,280 x 1,024)
- Aspect Ratio: 4:3 (native), 16:9
- Brightness: 2,000 ANSI Lumens
- Contrast Ratio: 2000:1
- Projection Screen Size: 24.6" to 295.2"
- Lamp Life: 3,000 hours
- DVI port



Our Price **\$1567** Save **\$752**
WebCode.....ACP6940

Acer 17" LCD Monitor AL1716

- Brightness: 300cd/m2
- Contrast Ratio: 500:1
- View Angle: 150 / 135 (H/V)
- Response Time: 12ms
- Resolution: 1280 x 1024



Great Value

Our Price **\$333** Save **\$160**
WebCode.....ACM0058

Acer 19" LCD Monitor AL1916

- Brightness: 300cd/m2
- Contrast Ratio: 500:1
- View Angle: 150 / 130 (H/V)
- Response Time: 8 ms
- Resolution: 1440 x 900



HOT PRODUCT

Our Price **\$429** Save **\$70**
WebCode.....ACM0059

Acer 19" Widescreen LCD Monitor AL1916W

- Brightness: 300cd/m2
- Contrast Ratio: 500:1
- View Angle: 150° H and 130° V
- Response Time: 8 ms
- Resolution: 1440 x 900 @ 76Hz



HOT PRODUCT

Our Price **\$485** Save **\$64**
WebCode.....ACE0070

Acer 32" LCD Television

The all new Acer AT3201W LCD TV takes high definition visual home entertainment to another dimension by combining the very latest technology, superior design and full connectivity with existing home AV equipment to provide everything you need to enjoy easy access to the world of high-impact home entertainment.

- Resolution: 1366 x 768
- Brightness: 550 cd/m2
- Contrast Ratio: 800:1
- Response Time: 12ms
- View Angle: H:170 V:170



NEW

Our Price **\$1799** Save **\$200**
WebCode.....ACM0068

Acer 37" LCD Television with Built in Media Gateway

- Resolution 1920 x 1080
- SRS WOW and Dolby Digital sound
- 176 degree Viewing Angle
- Picture in Picture
- HDMI (High Definition Multimedia Interface)
- MGW (Media Gateway)
- Card Reader
- 3 Year Warranty



NEW

Our Price **\$3446** Save **\$253**
WebCode.....ACM0070

Series:	TM2434WLMi (Notebooks)	TM 4202LMi (Notebooks)
Manufacturer #:	LX.TC305.170	LX.TAV05.068
Processor:	Intel Celeron M 380 1.6GHz	Intel Core Duo processor T2300 1.66GHz
Memory (Ram):	512M PC-2700	512MB DDR2
Video Card:	Intel 910GML integrated 3D AGP Graphic	Intel Graphic Media Accelerator 950
Hard Drive:	60GB	80GB
Optical Storage:	DVD Dual layer	Dual Layer DVD+-RW
Display	15.4" Active colour widescreen	15" XGA TFT
Modem/Ethernet	56K V.92, 10/100 NIC, Wifi	56K V.92, 10/100 NIC, Wifi
Operating System	Microsoft Windows XP Home	Microsoft Windows XP Home

Our Price **\$1199**

WebCode.....ACN9161

Our Price **\$1760** Save **\$125**

WebCode.....ACN1096

Series:	Aspire 1694WLMi (Notebooks)	TM4074WLMi (Notebooks)
Manufacturer #:	LX.AB405.066	LX.TBC05.092
Processor:	Intel Pentium M 760 2.0GHz	Intel Pentium M 760 2GHz
Memory (Ram):	1GB DDR2	1GB DDR2
Video Card:	ATI X700 PCI Accelerator 256MB	Intel 915GM Graphics
Hard Drive:	100GB	100GB
Optical Storage:	Dual Layer DVD+-RW	Dual Layer DVD+-RW
Display	15.4" WXGA Widescreen TFT XGA	15.4" TFT WXGA
Modem/Ethernet	56K V.92, Gigabit, Bluetooth	56K V.92, 10/100 NIC, Wifi
Operating System	Microsoft Windows XP Home	Microsoft Windows XP Home

Our Price **\$2386** Save **\$213**

WebCode.....ACE0031

Our Price **\$1829** Save **\$170**

WebCode.....ACN9163



1 Year Warranty

Image used for illustration purposes only



1 Year Warranty

Image used for illustration purposes only

See page 2 for details!

smart buy club 3% rebate

Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy

HP ProLiant ML350 G4 - Server

Designed for all round ease of ownership and expandability. Up to 75 users.

Part Number 470063-B21

- Intel® Xeon™ Processor 3.0GHz, 2MB Cache
- Microsoft® Windows® 2003 Small Business Server - Standard Edition
- 1GB RAM
- 641 Smart Array Controller
- 2 x 72GB 10k Hot Plug U320 HDD
- Integrated Lights-Out Standard Management
- Trend Micro 12Mnth/3 License Security Software
- StorageWorks DAT72 Internal Drive



3 Year Warranty

Our Price **\$4895**

Save **\$100**

WebCode.....HOB0047



Image used for illustration purposes only.

Purchase Office 2003 on your new PC - It's Cheaper!

Buy Office 2003 with a new PC and SAVE approximately 55% off the RRP of full commercial versions! Call 1300 658 600 for more details on purchasing Office 2003 Edition with your new PC. (OEM 2003 versions)



Logitech V20 Notebook Speakers

Finally, get great audio from your laptop with the Logitech V20 Notebook Speakers. The USB port provides power and digital quality audio—no other cables necessary.



Our Price **\$99**

Save **\$31**

WebCode.....LOG3508

Canon IP90 Portable Colour Printer

- 4800 x 1200 dpi printing
- 2 picolitre technology
- Direct Digital Camera Printing - no PC required
- Up to 16ppm black and 12ppm colour
- Up to A4 size borderless photo printing
- USB, Infrared and optional Bluetooth interfaces
- Optional battery kit



Our Price **\$399**

Save **\$100**

WebCode.....CAN0379

Series:	dx5150 (Desktops)	dx5150 (Desktops)
Manufacturer #:	EY140PA	EY141PA
Processor:	AMD Athlon 64 3200+	AMD Athlon 64 3200+
Memory (Ram):	512MB Ram	1GB RAM
Video Card:	ATI Radeon 200 Chipset	ATI Radeon 200 Chipset
Hard Drive:	80GB 7200 RPM SATA Hard Drive	160GB 7200 RPM SATA Hard Drive
Optical Storage:	CD-RW/DVD Combo	6 X DVD +/- RW Drive
Ethernet:	Integrated Realtek AC97 Audio	Integrated Realtek AC97 Audio
Operating System:	Win XP Pro	Win XP Pro
Warranty:	3 Year Parts, 1 year onsite labour	3 Year Parts & Labour

Our Price **\$949**

Save **\$50**

Our Price **\$1159**

Save **\$51**

WebCode.....HPC0053

WebCode.....HPC0054



Monitor not included. Image used for illustration purposes only.

Dual Monitor Capability

Series:	nx6120 (Notebooks)	nx6125 (Notebooks)
Manufacturer #:	EA560PA	ER643PA
Processor:	Intel Pentium M 740 1.73GHz	AMD Turion ML-40 (2.2GHz)
Memory (Ram):	512MB DDR 333MHz	1GB DDR 333MHz
Video Card:	Intel Graphics Media 900	ATI Mobility Radeon X300 - 128MB
Hard Drive:	40GB 5400 RPM	80GB 5400 RPM
Optical Storage:	Dual Layer DVD+-RW	Dual Layer DVD+-RW
Display:	15" TFT SXGA	15" TFT SXGA+
Modem/Ethernet:	56K V.92, 10/100/1000 NIC, Wifi, BT	56K V.92, 10/100/1000 NIC, Wifi, BT
Pointing Device:	Touchpad	Touchpad
Operating System:	Microsoft Windows XP Pro	Microsoft Windows XP Pro

Our Price **\$1755**

Save **\$40**

Our Price **\$2345**

Save **\$50**

WebCode.....HCN0033

WebCode.....HCN0049



HP NX6120 notebook displayed

1 Year Warranty

Series:	nx8220 (Notebooks)	nx8220 (Notebooks)
Manufacturer #:	EA563PA	EA564PA
Processor:	Intel Pentium M 750 1.86GHz	Intel Pentium M 760 2GHz
Memory (Ram):	512MB DDR 400MHz	512MB DDR 400MHz
Video Card:	ATI Mobility Radeon X600	ATI Mobility Radeon X600
Hard Drive:	60GB 5400rpm	80GB 5400rpm
Optical Storage:	Dual Layer DVD+-RW	Dual Layer DVD+-RW
Display:	15.4" TFT WXGA	15.4" TFT WSXGA+
Modem/Ethernet:	56K V.92, 10/100/1000 NIC, Wifi, BT	56K V.92, 10/100/1000 NIC, Wifi, BT
Pointing Device:	Touchpad	Touchpad
Operating System:	Microsoft Windows XP Pro	Microsoft Windows XP Pro

Our Price **\$2223**

Save **\$72**

Our Price **\$2649**

Save **\$46**

WebCode.....HCN0034

WebCode.....HCN00410



HP NX8220 notebook displayed

1 Year Warranty

Servers, Desktops & Notebooks

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 5 Year Warranty

Notebooks & LCD Monitors

LG External 16x USB Dual Layer DVD Burner

A leading manufacturer of optical storage devices, LG's quality is recognised by customers around the world, based on experience and innovative practices. This model is compatible with all DVD formats and incorporates SuperLink Buffer Under Run Prevention Technology so you don't end up with coasters.



Our Price \$165 **Save \$134**
WebCode: LGE0044

LG 17" Touch Screen Monitor

- LG's Touch Screen Monitor
- Touch Sensor Function
- 4 Way resistive Sensor
- High Durability (1.5 Million Times)
- Polyester Pen or Finger
- Anti Glare LCD Panel
- Hard Coating (3H)



Our Price \$988 **Save \$211**
WebCode: LGE0074

LG 17" Premium Slim Monitor

- World first picture enhancing Chip for LCD Monitor
- Real Colour Management (RMC) express natural colours
- Adaptive Colour and Contrast Enhancement (ACE) function to enhance brightness and contrast
- Ideal for mobile imaging in TV, Film (such as movie), Gaming, pictures & animation



Our Price \$556 **Save \$143**
WebCode: LGE0075

LG Notebooks

Series: LW70 Express Series
Manufacturer: LW70-HGJA
Processor: Intel Pentium M Processor 1.73MHz FSB
Memory (Ram): 512MB DDR2 533MHz
Video Card: ATI Mobility Radeon X600
Hard Drive: 60GB
Optical Storage: Super-Multi DVD+/-RW Dual Layer
Display: 17.1" WXGA
Modem/Ethernet: 56K modem, 10/100, Wireless
Pointing Device: Touchpad with Scroll Function
Operating System: Microsoft® Windows® XP Professional
Warranty: 1YR International Warranty

Our Price \$2476 **Save \$223**
WebCode: LGE0049

	K1 Express Dual Series (Notebooks)	LW40 Express (Notebooks)	M1 Express Dual Series (Notebooks)
Manufacturer #:	K1-2224A	LW40-YKXA 14" Widescreen	M1-52A6A
Processor:	Intel Pentium M Processor 1.73GHz (740)	Intel Pentium M Processor 1.86GHz (750)	Intel® Core™ Duo Processor T2300 1.66GHz
Memory (Ram):	512MB 533MHz DDR2	1GB DDR2 (533MHz, up to 2GB)	512MB 533MHz DDR2
Video Card:	Intel GMA 900	ATI Mobility Radeon X600	Intel GMA 950
Hard Drive:	60GB	80GB	80GB
Optical Storage:	DVD Super-Multi Dual Layer	Super-Multi (DVD+/-RW, DVD-RAM) Dual Layer	DVD Super-Multi Dual Layer
Display:	15" XGA (1024 x 768)	14" WXGA (1280 x 768)	15" XGA (1024 x 768)
Modem/Ethernet:	56K modem, 10/100, Wireless	56Kbps Modem	56K modem, 10/100, Wireless
Pointing Device:	Touchpad w/ Scroll Function	Touchpad with Scroll Function	Touchpad w/ Scroll Function
Operating System:	Microsoft Windows XP Professional	Microsoft® Windows® XP Professional	Microsoft Windows XP Professional
Warranty:	1yr International Warranty	1yr International Warranty	1yr International Warranty

Our Price \$1449 **Save \$50**
WebCode: LGE0071

Our Price \$2245 **Save \$227**
WebCode: LGE0045

Our Price \$2125 **Save \$74**
WebCode: LGE0072

LG 17" Standard LCD Monitor

The clean line and sophistication of the circular stand, streamlined backside and ergonomic design bring style to satisfy the unique criteria of the young generation

- Brightness : 250cd/m2
- View Angle : 160 / 160 (H/V)
- Contrast Ratio : 500 : 1
- Response Time : 12ms
- Resolution : 1280 x 1024



Our Price \$348 **Save \$151**
WebCode: LGE0034

LG 17" Narrow Bezel LCD Monitor

The clean line and sophistication of the circular stand, streamlined backside and ergonomic design bring style to satisfy the unique criteria of the young generation.

- Brightness : 250 cd/m2
- Viewing Angle : H: 160, V: 160
- Contrast Ratio : 600 : 1
- Response Time : 8ms
- Resolution : 1280 x 1024



Our Price \$348 **Save \$163**
WebCode: LGE0035

LG 19" Narrow Bezel LCD Monitor

The clean line and sophistication of the circular stand, streamlined backside and ergonomic design bring style to satisfy the unique criteria of the young generation.

- Brightness : 250 cd/m2
- Viewing Angle : H: 160, V: 160
- Contrast Ratio : 500 : 1
- Response Time : 12ms
- Resolution : 1280 x 1024

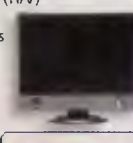


Our Price \$465 **Save \$334**
WebCode: LGE0036

LG 17" Widescreen LCD Monitor With AV Function

All user can conveniently access to AV devices such as DVD player, Video game, Camcorder and VCR Narrow and Slim Design, Excellent picture quality and control, Multiple connection for PC, AV & Widescreen with built in speaker.

- Brightness : 450 cd/m2
- Viewing Angle : 178 / 178 (H/V)
- Contrast Ratio : 600 : 1
- Response Time (ms) : 12ms
- Resolution : 1280 x 1024



Our Price \$689 **Save \$310**
WebCode: LGE0038

LG 19" Stylish LCD Monitor

Introducing the new 80 series LCD Flatron monitor from LG; the slimmest flatscreen in its class. Its f-ENGINE technology features the first LCD picture-enhancing chip to provide not only astounding color, but superb contrast and image quality.

- Brightness : 450 cd/m2
- Viewing Angle : 178 / 178 (H/V)
- Contrast Ratio : 600 : 1
- Response Time (ms) : 12ms
- Resolution : 1280 x 1024

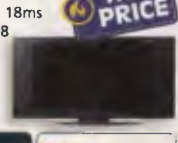


Our Price \$729 **Save \$470**
WebCode: LGE0037

LG 32" Widescreen LCD Screen With Built In TV Tuner

LG's wide display FLATRON LCD monitors are the ideal solution wherever wide-screen displays are required.

- Brightness : 500 cd/m2
- Viewing Angle : 178 / 178
- Contrast Ratio : 1600 : 1
- Response Time (ms) : 18ms
- Resolution : 1366 x 768



Our Price \$2199 **Save \$1800**
WebCode: LGE0039

Series:	R23EV12	NEW	R55V16	NEW
Manufacturer #:	98.K7011.V12		9H.01501.V16	
Processor:	AMD Mobile 3000+ 1.8Ghz		Intel Centrino Duo 1.66GHz	
Memory (Ram):	256MB DDR 333		1024MB DDRII 533 Dual Channel	
Video Card:	VIA Unichrome Pro max 64MB		128MB NVIDIA GeForce Go 7400	
Hard Drive:	60GB 4200rpm		80GB 5400rpm SATA	
Optical Storage:	Double-Layer DVD Burner		Double-Layer DVD Burner	
Display	15" XGA 1024x768		15.4" WXGAG 1280x800	
Modem/Ethernet	802.11 a/b/g Wireless		802.11 a/b/g Wireless	
Operating System	Microsoft Windows XP Home		Microsoft Windows XP Pro	

Our Price **\$1136**

Save **\$63**

Our Price **\$2196**

Save **\$103**

WebCode BEN7417

WebCode BEN7503



BenQ R55V16 model displayed

2 Year Warranty

BenQ FP72G+ 17" LCD Monitor

- Brightness: 300cd/m2
- Viewing Angle: 140/130 (H/V)
- Contrast Ratio: 500:1
- Response Time: 8ms
- Resolution: 1280 x 1024



Our Price **\$399**

Save **\$100**

WebCode BEN1065

BenQ FP91G+ 19" LCD Monitor

- Brightness: 250cd/m2
- Viewing Angle: 140/130 (H/V)
- Contrast Ratio: 550:1
- Response Time: 8ms
- Resolution: 1280 x 1024



Our Price **\$445**

Save **\$154**

WebCode BEN1057

BenQ FP71G 17" LCD Monitor

- Brightness: 260cd/m2
- Viewing Angle: 140/130 (H/V)
- Contrast Ratio: 500:1
- Response Time: 12ms
- Resolution: 1280 x 1024



Our Price **\$456**

Save **\$143**

WebCode BEN1052

Series:	Samsung X1	Samsung X60
Manufacturer #:	NP-X1-T000/SAU	NP-X60TV02/SAU
Processor:	Intel Pentium M ULV 1.2GHz (753)	Intel Core Duo T2300 1.66GHz
Memory (Ram):	512MB DDRII 400MHz	1GB DDRII 533MHz
Video Card:	Intel 915GMS	ATI Mobility Radeon X1400
Hard Drive:	60GB 4200rpm	100GB 5400rpm SATA
Optical Storage:	DVD Dual Layer Burner	Super Multi Dual Layer Burner
Display	14.1" WXGA 1280 x 768	15.4" WXGA / WSXGA+
Modem/Ethernet	Intel 802.11abg	Intel 802.11abg
Operating System	Microsoft Windows XP Pro	Microsoft Windows XP Pro

Our Price **\$2790**

Save **\$209**

Our Price **\$2896**

Save **\$203**

WebCode SAM1788

WebCode SAM1789



Samsung X60 model displayed
*Port Replicator Not Included

1 Year Warranty

Samsung 19" Thin Bezel LCD Monitor

Providing exceptional performance, the 940N TFT monitor from Samsung utilises the very latest technology to deliver vibrant, detailed images from a sleek and stylish unit.

- Brightness: 300 cd/m2
- Viewing Angle: 160 / 160 (H/V)
- Contrast Ratio: 700:1
- Response Time: 8ms
- Resolution: 1280 x 1024



Our Price **\$457**

Save **\$42**

WebCode SAM1950

Samsung CLP-510 Colour Laser Printer

Print your colour documents the way they were designed to be printed... on both sides 6ppm colour/ 24ppm mono Auto duplex for double sided printing 64Mb of onboard memory USB 2.0 connectivity Windows compatibility 3 year on-site warranty



Our Price **\$482**

Save **\$117**

WebCode SAM5110

Samsung ML-2551N Wireless Mono Laser Printer

Find another use for all those old printer cables, because you won't need them any more. This printer is packed with technological innovations designed to save you time and paper, add extra convenience and increase your business productivity. 24 PPM Mono32MB memory 500 page sheet tray 100 sheet multi feeder Win, Mac & Linux compatible



Our Price **\$878**

Save **\$417**

WebCode SAM2551

Fujitsu Lifebook P1510 Notebook

Ultra light, weighing in at around 1kg yet incredibly versatile with convertible form factor and pen input, the Fujitsu P1510 LifeBook boasts 1.2GHz ULV, Intel 915GMS, 512MB DDR2 RAM, 60GB hard drive, 56K Modem, as well as Bluetooth, superior security with biometric fingerprint sensor and Windows XP Tablet Edition.



Our Price **\$2789**

Save **\$360**

WebCode FTL0027

Fujitsu Lifebook S7020 Notebook Bundle

Experience accelerated performance with the new Intel Centrino Duo mobile technology on the new Fujitsu S7020 Lifebook. It boasts a 14.1" XGA SuperFine screen, 512MB DDR2 RAM, 80GB SATA hard drive, as well as Bluetooth and superior security with biometric fingerprint sensor, all covered by a 3 year warranty.

Includes Carry Case and Security Lock



Our Price **\$2699**

Save **\$300**

WebCode FUJ0038

Check out our vast range of notebook accessories at
www.csw.com.au

Buying the latest IT hardware? Why not extend your warranty! See page 2 for details!

UP TO 3 Year Warranty

Blueant X3 Micro Bluetooth Headset

The award winning X3 micro Bluetooth headset is one of the smallest and best performing headsets available in the world. Lightweight, stylish and comfortable, the X3 micro is the ultimate Bluetooth accessory for people on the move. The X3 micro can be paired to 3 different Bluetooth devices and comes with multiple charging options including USB, wall and in car chargers.



Our Price \$97 **Save \$32**
WebCode.....BLU0008

Blueant EzyTalk Bluetooth Handsfree Car Kit

The totally wireless EzyTalk Bluetooth plug and go handsfree car kit offers both excellent sound quality and zero installation costs. The microphone and speaker are integrated in a stylish and compact design with a DSP (Digital Sound Processor) to minimise echo effect and background noise. The EzyTalk is powered by the vehicle lighter socket.



Our Price \$118 **Save \$21**
WebCode.....BLU0009

Blueant Supertooth II Bluetooth Speakerphone

This speakerphone provides the user with exceptional sound quality via totally wireless Bluetooth technology. Mounted on a magnetic clip attached to the vehicle sun visor, the Supertooth II is the ideal Bluetooth handsfree solution requiring zero installation costs, as well as the ability to change vehicles quickly and easily.



Our Price \$159 **Save \$40**
WebCode.....BLU0007

Palm Z22 Handheld Organiser

Meet the Palm Z22 organiser. Yes, a handheld organiser sounds serious. But it's actually a lot of fun. In fact, you can get started in just a few simple steps. Pick it up. It's small and light. Turn it on. There's a bright colour screen. Check it out. You can store appointments, phone numbers, to-do lists, and photos. The Palm Z22 organiser holds life's details and lets you find it all fast. Take it wherever life takes you, then get home and save everything to your computer with one tap. It's a little organiser with a lot to love.



Our Price \$169 **Save \$10**
WebCode.....USR6580

Eten M600 Pocket PC Smartphone

The perfect combination of wireless technology and style this sleek and compact design Smartphone uses Windows Mobile 5.0 and features: 400mhz Processor, 64MB SDRAM / 128MB Flash Rom, Quad-band GSM module GPRS, WiFi, Bluetooth, 1.3Megapixel Digital camera, 64 Polyphonic Ring tone Integrated Multimedia Picture & Video capture, Built-in Mic & Speakers. Software is preloaded and provides you with: Calendar, Contacts, Tasks, Voice Recorder, Notes, Pocket Word, Excel, Internet Explorer, Windows Media Player 10, Calculator, MSN messenger and lots more. Kit includes: E-Ten Phone, Stylus, Cradle, USB sync cable, AC Adaptor, Headset, Case and quick start guide with software CD



Our Price \$935 **Save \$264**
WebCode.....ETE0002

O2 Xda Atom Pocket PC Smartphone

This sleek piano-black device sets a new benchmark in product design by being the world's first PDA-phone to feature a 2.0 mega pixel camera with a built-in flash and an FM radio tuner. Weighing a mere 140 grams and measuring only 58 (W) x 102 (L) x 18.5 (T) mm, the Xda Atom has all the features users expect from bigger PDA phones in a small package. Intel PXA272 416MHz Processor, 2.7" TFT LCD display with touch panel, 240 x 320 dots resolution Colour 2-mega-pixel CMOS camera, MiniSD memory card slot, Stereo speaker, Bluetooth connectivity Wireless LAN IEEE 802.11b compliant, Tri-band GSM/GPRS/EDGE: GSM900, GSM1800, GSM1900



Our Price \$1092 **Save \$137**
WebCode.....XDA0800

Navman ICN320 Portable Satellite Navigation

Designed to be so simple that it's ready to use straight out of the box, the iCN 320 delivers hassle-free top-quality GPS navigation. Its high-definition colour screen ensures you can see maps and instructions clearly. And if you prefer to hear the directions, that clarity extends to the device's voice. The iCN 320 offers ready-to-use GPS navigation out of the box without the need to hook it up to a PC, so you can enjoy:

- Door-to-door navigation using pre-loaded software
- Navigating to addresses across Australia
- Easy-to-use multi-directional pad
- Voice-guided directions



Our Price \$489 **Save \$70**
WebCode.....NAV0010

HP Ipaq HX2190 Handheld

Greater connectivity in more ways than ever. Connect effortlessly with advanced integrated Wi-Fi capability or communicate wirelessly with other Bluetooth devices. Get ready for the next generation technology with revolutionary Microsoft® Windows Mobile™ Version 5.0. Take your music and video with you wherever you go with the latest Windows Media® Player. Enhanced security protection with the biometric fingerprint reader* that recognizes your unique fingerprint or combination of PIN and password.



Our Price \$469 **Save \$30**
WebCode.....COQ0128

I-Mate K-JAM Pocket PC Smartphone

- Microsoft Windows Mobile 5.0
- Quad Band Mobile Phone
- Built in QWERTY Keyboard
- Bluetooth Compatible
- MiniSD Card Expansion
- 64K Colour Screen
- Built in WIFI 802.11 B/G/E
- 1.3Megapixel Camera
- Integrated Antenna



Our Price \$1058 **Save \$141**
WebCode.....CEL0001

HP IPAQ HW6515 Mobile Messenger

- Gain the ultimate EDGE with high speed international QUAD band GSM, GPRS, EDGE, voice and data connectivity plus Bluetooth technology.
- Integrated GPS Receiver.
- Real-time access to email, picture and video messaging, text messaging or instant messaging.
- Built-in 1.3 Mega Pixel HP Photosmart camera



Our Price \$879 **Save \$120**
WebCode.....COQ0126

Tom Tom One Portable Satellite Navigation Bundle

Your first step in car navigation? TomTom ONE combines ease of use, portability, TomTom's touchscreen technology and a sleek new design. Drivers can enjoy the benefits of a TomTom ONE immediately, thanks to TomTom's award-winning plug and drive navigation software pre-installed on a memory card. This means there is no need to download complicated software, just plug in and start using.

- Just plug in, switch on & GO
- car to car
- Touch-Screen Operation
- Clear and Accurate: Turn-by-turn voice instructions.



Bonus Carry Case
Our Price \$829 **Save \$150**
WebCode.....TOM0090

Did you know that you can get up to 3% rebate on every order?
www.csw.com.au/smartbuy

See page 2 for details!
3% rebate

Aten 1u Slideaway Rackmount LCD KVM

ATEN Slideaway LCD KVM solutions incorporate an 8 and 16-port KVM switch in a Slideaway rack console with 15" or 17" high-resolution LCD monitor, keyboard and touchpad. Existing standard KVM installations can be controlled with the CL-1200 Slideaway LCD Console. With the compact Slideaway design, high density in less than 1U of rack space and enterprise-class features, the CL-1208, CL-1216 and CL-1200 are optimized for sophisticated server room management. Dual console capability allows simultaneous server control from a second PS/2 console. The CL-1208 and CL-1216 are both PS/2 and USB compatible, and supported under Windows and Linux. Add the CN-6000 KVM on the NET to provide manageability from anywhere via a web browser and IP connection.

- Space saving 1U rackmount
- Dual console
- PS/2 and USB compatible
- Windows and Linux compatible



Model	CL-1200LA	CL-1208LA	CL-1216LA	CL-1200MA	CL-1208MA	CL-1216MA
Ports	1	8	16	1	8	16
Max Ports Via Chaining	N/A	256	512	N/A	256	512
LCD Panel	15"	15"	15"	17"	17"	17"
Maximum Resolution	1024 x 768	1024 x 768	1024 x 768	1280 x 1024	1280 x 1024	1280 x 1024
Port Selection Keys	N/A	Yes	Yes	N/A	Yes	Yes
2nd Console Port	Yes	Yes	Yes	Yes	Yes	Yes
On Screen Menu	N/A	Yes	Yes	N/A	Yes	Yes
Web Code	ANY0266	ANY0267	ANY0268	ANY0269	ANY0270	ANY0271
Price	\$1887	\$2346	\$2759	\$2149	\$2727	\$3157

Aten PS/2 KVM extender with audio

Users inexpensive Cat5 cable to connect the local and remote units up to 150m apart.

Audio support for long distance speaker control. Dual Console Operation- Control your system from both local and remote consoles.



Our Price **\$449** Save **\$100**
WebCode.....ANY0311

Aten USB to DB9 serial adaptor

Provide PCs and Notebooks with a RS-232 Serial Interface. Up to 230Kbps data transfer rate.



Our Price **\$29** Save **\$11**
WebCode.....ANY0312

Aten 2 Port Compact KVM

The rugged Petite series of KVMs with built-in cables, feature a 50% smaller desktop footprint than traditional compact KVM switches.

- 2 Port with Audio (ANY0217) **\$48**
- 2 Port USB with Audio (ANY0218) **\$69**
- 4 Port with Audio (ANY0219) **\$88**
- 4 Port USB with Audio (ANY0220) **\$110**



Our Price **\$42** Save **\$7**
WebCode.....ANY0216

Aten 2 Port Desktop KVM

Rugged 2 or 4 port desktop KVM in metal chassis. Connect one keyboard, mouse and monitor to 2 or 4 computers. No software required. Operate via push button or Hotkey. Slim 3 in 1 cables included in the box!!!

ATEN 4 Port Desktop KVM (ANY0273) **\$119**



Our Price **\$68** Save **\$11**
WebCode.....ANY0272

Aten 4 Port Rackmount KVM

Control up to 4 computers, while using only 1U of rack space. Cascade up to 21 CS-9134 Masterview KVMs to control up to 64 computers, all from a single console. Features On Screen Display and push button or hotkey operation.

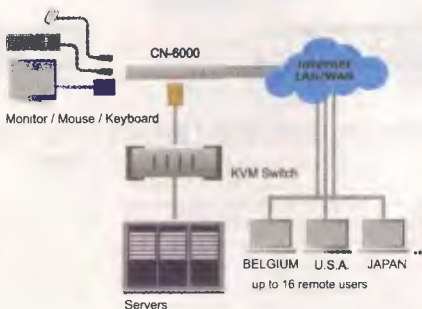
ATEN 8 Port Rackmount KVM (ANY0275) **\$410**



Our Price **\$272** Save **\$23**
WebCode.....ANY0274

Aten KVM on the NET 16 port

Remote access of KVM switches or servers via LAN, WAN, or the Internet. Support up to 32 users can log in at the same time for concurrent access to a server. Message board feature allows logged in users to communicate with other user. With Radius Support. Supports up to 64 user accounts. Superior video quality-up to 1600x1200. Advanced security features: 1024 bit RSA encryption. Firmware Upgradeable via RJ-45 Ethernet connection Remote bootup.



Aten KVM on the NET
Our Price **\$3176** Save **\$124**
WebCode.....ANY0276

Aten 2 In/2 Out VGA video matrix switch

video and audio signals from 2 computers to 2 monitors/projectors and an amplifier. Ideal for presentations and sending information from multiple computers to multiple terminal displays.

Aten 2 in/4 out vga video matrix switch (ANY0310) **\$229**



Our Price **\$165** Save **\$34**
WebCode.....ANY0309

Aten 2 Port Video Splitter 250Mhz

Ideal solution for training or presentation scenarios where you need to display what's on your monitor onto a Projector or another monitor. Supports XGA, SVGA, VGA and multisync monitors.

- 4 Port Video Splitter 250Mhz (ANY0138) **\$77**
- 8 Port Video Splitter 200Mhz (ANY0139) **\$99**



Our Price **\$55** Save **\$14**
WebCode.....ANY0137

Imation Super DLT Tape Cartridges

- Super DLTape I provides up to 320GB of storage
- Super DLTape II provides up to 600B of storage
- Accuracy - Optical servo tracks enable accurate data reading/writing.
- Durability - 1,000,000 pass tested.
- Lifetime Warranty.

Blackwatch SDLT
160/320GB Single
(MMM2230) **\$88**

Blackwatch SDLTII
300/600GB Single
(MMM5840) **\$165**



Imation Ultrium (LTO) Cartridges

- Ultrium (LTO) Gen 1 provides up to 200GB of storage
- Ultrium (LTO) Gen 2 provides up to 400GB of storage
- Ultrium (LTO) Gen 3 provides up to 800GB of storage
- Patented three-piece tape spool design results in better tracking and fewer errors.
- Lifetime Warranty.

Blackwatch LTO 100/200GB
Single (MMM0657) **\$57**

Blackwatch LTO 200/400GB
Single (MMM5417) **\$87**

Blackwatch LTO 400/800GB
Single (MMM4585) **\$165**



Imation 12" Tape Cleaning Cartridges

The Ultrium (LTO) tape cleaning cartridge is compatible in all Ultrium (LTO) tape drives. With cleans per cartridge range between 15 to 50+ cleans. While the Super DLTapeTM cleaning cartridge provides up to 20 cleans.

Imation SDLT Cleaning Tape
(MMM5040) **\$147**

Imation Ultrium Universal
Cleaning Tape (MMM6904) **\$90**



MGE NOVA 1100VA

Cost effective solution for protection personal and professional PC. Ideal protection for 1 to 3 PCs either in a business environment or at home. Perfect protection against electrical interference and power cutouts.

- Line interactive technology (automatic voltage correction via Booster + Fader)
- Wide tolerance to fluctuations in the mains power supply (160V to 290V)
- Cold start function - use Nova as a mobile power source for IT equipment
- Protection for Telephone / fax / modem and Internet Line (including ADSL)



Our Price **\$215** Save **\$38**
WebCode MGE0032

MGE Extreme-C 1500VA (Rack)

On-line double conversion UPS as tower or rack-optimised form factor. ON-LINE Double Conversion technology, compatible with all application and environment. High-end power protection ideal for Servers, Networking & VOIP, Storage, Telecom and Medical Equipment.

- 2U Rack form factor
- Permanent voltage and frequency regulation
- Multiple server Shutdown (software included)
- Optional EXB Battery extension for longer backup time
- Comprehensive Rack-mounting kit included



Our Price **\$1785** Save **\$397**
WebCode MGE0060

Tandberg SDLT320 External Drive Kit

The SDLT 320 presents a major advance in capacity and performance over the very popular DLT8000.

- 320GB* of Compressed Capacity
- Kit includes: 1 SDLT Media, SCSI Cable & Terminator and Power Cord
- 3 Years Advanced Replacement Warranty*



Our Price **\$4275** Save **\$477**
WebCode TAN0020

Tandberg LTO 2 HH StorageLoader

NEW StorageLoader LTO2 Half Height offers capacity and performance as well as advanced data management features in a compact low profile 1U form factor.

- 8 Slots, up to 3.2TB* capacity
- 1U Form factor
- Includes: Rack mount kit, SCSI Cable & Terminator and Power Cord



Our Price **\$6599** Save **\$371**
WebCode TAN0005

Tandberg 420 LTO 2 Internal Drive

The world's most compact LTO2 drive with unrivalled performance. NEW Half Height Internal LTO2 bare drive. LTO2 capacity at LTO1 prices!

- Up to 400GB* Capacity
- Space saving half height design
- Up to 173GB*/hr performance
- 3 Years Advanced Replacement Warranty



Our Price **\$2649** Save **\$306**
WebCode TAN0003

Tandberg S24LTO3 Library

The Tandberg S24 is outstanding value for IT Departments that have outgrown autoloaders. A compact, two-drive library, the S24 combines enterprise-class features and performance with entry-level affordability and ease of use.

- 24 cartridges (Up to 19.2TB*)
- Up to 2 LTO3 tape drives (transfer rate up to 1TB/hr)
- Space efficient unit in only 4 rack units.
- Remote management and partitioning
- 3-year warranty

*assumes 2:1 compression



Our Price **\$14572** Save **\$2283**
WebCode TAN0141

MGE Pulsar Evolution 1500VA Rack

High density protection for network devices. Line-Interactive High Frequency technology, combined with the most compact design on the market (1U or 2U space in the rack), means that the Pulsar Evolution is the ideal high density protection unit for environments in which space is at a premium.

- USB and Serial ports as standard
- Concurrent support for SCSI and IP protocols
- Comes with Solution-Pac software suite - UPS can be monitored in SNMP or via the Web.
- Programmable PowerShare socket
- 2-year warranty

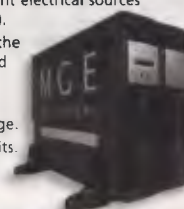


Our Price **\$1040** Save **\$252**
WebCode MGE0053

MGE UPS Comet EX RT 7kVA Tower

High performances UPS for single phase application. Ideal for Perfect for rack servers enclosures and industrial environment.

- Hot swappable UPS and battery modules.
- Internal bypass and maintenance bypass included as standard.
- The UPS can be connected to two independent electrical sources (sources 1 and 2 can be common or separate).
- Large input voltage range without draining the battery: 230V +20% to -30% single phase and 400V +15% to -20% three phase.
- Batteries tested automatically at regular intervals and protected against deep discharge.
- N+1 redundancy supported by two single units.



Our Price **\$4799** Save **\$1058**
WebCode MEG0063

Tandberg 420 LTO 2 External Kit

NEW Half Height External LTO2 drive kit. Industry leading performance at an affordable price.

- Up to 400GB* Capacity
- Revolutionary half height design
- Includes SCSI Cable and Terminator
- 3 Years Advanced Replacement Warranty

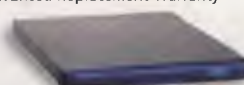


Our Price **\$2860** Save **\$316**
WebCode TAN0004

Tandberg Viking FS-400 NAS

NEW 1TB NAS appliance, perfection addition for department storage and enterprise. Ideal for file sharing, near-line storage, disk to disk backup and remote office server.

- Microsoft OS
- 4HDD with 1TB Capacity
- Rack mount kit
- RAID 1 and 5
- 3 Years Advanced Replacement Warranty*



Our Price **\$6159** Save **\$821**
WebCode TAN0007

See page 2
for
details!
**30%
rebate**

Did you know that you can get
up to 30% rebate on every order?
www.csw.com.au/smartbuy

Comsol ServerLink LCD KVM Rack Drawers

Combining dual functionality of both PS/2 and USB connections, these multi-platform KVM's are designed to readily integrate into your existing network infrastructure.

The High Density Streamline Series includes either a single unit, an 8 port and 16 port unit, all with a console drawer and 15" or 17" LCD. Simply order your PS/2 or USB cables to ensure seamless integration with your existing environment.

For further information on the capabilities and price of the entire range of LCD ServerLink Combo racks, please contact our sales team.

Cables sold separately, see below for details.



Support for PS/2 & USB — PC/SUN/MAC

Model	LKS-101H	LKS-801C	LKS-1601C	LKS-1017H	LKS-8017C	LKS-16017C
No. of Computer Ports	1	8	16	1	8	16
LCD Panel Size	15"	15"	15"	17"	17"	17"
KVM Platform	N/A	PS/2 & USB	PS/2 & USB	N/A	PS/2 & USB	PS/2 & USB
OSD Menu	N/A	Yes	Yes	N/A	Yes	Yes
Maximum Resolution	1024 x 768	1024 x 768	1024 x 768	1280 x 1024	1280 x 1024	1280 x 1024
Rack Unit Size	1U	1U	1U	1U	1U	1U
WebCode	COM7510	SER0005	SER0006	COM7605	SER0007	SER0008
Price	\$2250	\$2540	\$2925	\$2589	\$2825	\$3199

Cables Required For ServerLink LCD — USE PS/2, USB or Combination of Both

1.8m LCD KVM Cable — PS2/VGA (COM7480) **\$28**

6m LCD KVM Cable — PS2/VGA (COM7500) **\$57**

1.8m LCD KVM Cable — USB/VGA (COM7485) **\$28**

3m LCD KVM Cable — USB/VGA (COM7495) **\$38**

Comsol ServerLink Elite 8 Port KVM Switch

Using high-density connections, and taking only 1U of rack space makes the ServerLink Elite 8 Port KVM ideal for any server room where space is at a premium.

8 Port KVM inc. 8 x 2m PS2/VGA cables (COM0085) **\$555**



Our Price \$465 Save \$34

WebCode COM0078

Comsol ServerLink Elite 16 Port KVM Switch

Using high-density connections, and taking only 1U of rack space makes the ServerLink Elite 16 Port KVM ideal for any server room where space is at a premium.

16 Port KVM inc. 16 x 2m PS2/VGA cables (SER0003) **\$625**



Our Price \$535 Save \$64

WebCode COM0079

Comsol ServerLink IP Remote Access Device

Access your servers from anywhere in the world! The ServerLink IP allows network administrators to manage, configure, troubleshoot and even reboot remote servers from a web browser.



Our Price \$719 Save \$55

WebCode COM0096

Comsol ServerLink Star 2 Port KVM Switches

Control 2 PCs with a single keyboard, monitor & mouse. All ServerLink Star KVM switches have audio and microphone support for multimedia applications. Available in PS/2 only, USB only and PS/2 + USB Combo.

2 Port PS/2 + USB (COM0077) **\$76**

2 Port USB (COM0076) **\$79**



Our Price \$69 Save \$10

WebCode COM0075

Comsol ServerLink Slim KVM Switches

With its slim size and ease of operation, it is an indispensable device for managing multiple PCs on your SOHO or Corporate desktop. Its compact and lightweight design fits comfortably anywhere on your desktop. Available in 2 or 4 port models.

4 Port KVM inc. 4 x PS2/VGA cables (COM0095) **\$175**



Our Price \$89 Save \$10

WebCode COM0094

Comsol ServerLink KVM Extender

Locate a keyboard/monitor/mouse set up to 150 meters away using an inexpensive Cat5/5E/6 UTP cable. The ServerLink Extend KVM Extender is designed to enable one computer to be controlled by one or two users.



Our Price \$445 Save \$54

WebCode SER0004

Comsol USB 2.0 flashIT2 Flash Drives

These pocket USB 2.0 flashIT2 Storage Drives plug directly into any standard USB port and are compatible with both PC and Macs.

512MB (COM0107) **\$64**

2GB (COM0109) **\$179**



Our Price \$99 Save \$10
WebCode COM0108

Comsol VGA Monitor Splitters

Simultaneously broadcasting one VGA signal to up to eight different monitors can never be easier with Comsol's high-end video splitters. Available in two, four and eight port models.

4 Port VGA Monitor splitter (COM9145) **\$145**

8 Port VGA Monitor splitter (COM9150) **\$219**



2Port VGA Splitter
Our Price \$107 Save \$18
WebCode COM09140

Comsol USB 2.0 Desktop Hubs

- Hi-Speed USB 2.0 Certified
- Blue LED to indicate power status
- Stylish aluminium casing
- Supports Plug & Play and Hot-Swapping
- Data transfer speeds up to 480Mbps
- No software required for easy installation

7 Port Hub (COM0117) **\$49**



4 Port Hub
Our Price \$32 Save \$13

WebCode COM0116

KVM'S

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 5 Year Warranty

Belkin NE-MS Messenger Case

Store your laptop in a stylish, removable sleeve for added protection. Available in a great variety of colours, with a choice of either microfibre or canvas materials. In addition to its modern style, the innovative and cutting edge design meets the demands of today's market, addressing both fashion and business needs.



Our Price \$72 **Save \$7**
WebCode: BEL4569

Belkin Freeport II Backpack

The Freeport II Backpack by Belkin packs all your electronic essentials and gives you maximum comfort as you travel. There's also plenty of storage room for pens, pencils, ID cards, paper files, CD or MP3 players, and floppy disks.



Our Price \$61 **Save \$17**
WebCode: BEL2279

Belkin Universal Notebook Travel Surge

The Belkin notebook travel surge protector, featuring the ultra-compact in-line design makes it perfect for both business and personal travel. Compatible with 3-prong adapters available on Dell, Compaq, and many other laptop computers.

2 prong version
(BEL0278) \$67
SAVE \$32



Our Price \$47 **Save \$52**
WebCode: BEL0277

Belkin SurgeMaster

A power surge or lightning strike can destroy your electronic equipment in an instant. The SurgeMaster range offers the best protection for all your sensitive electronic devices in your home or office. No amount of thunder and lightning will ever be able to scare away your protection. Be safe and smart; choose a SurgeMaster with telephone/data line protection and if you want to protect your AV equipment with coaxial connection, choose the surge protector that protects both.

WebCode	Product Description	Price	SAVE
BEL0244	Belkin Home Series Surge Cube	\$18	\$12
BEL0245	Belkin Home Series Surge Cube with Tel	\$23	\$17
BEL0247	Belkin Home Series 4-Way (2m Cord)	\$34	\$25
BEL0248	Belkin Home Series 4-Way (2m Cord) plus AV	\$46	\$33
BEL0250	Belkin Superior Series 6-Way (2m Cord) plus Tel	\$75	\$54
BEL0255	Belkin Gold Series 8-Way (2m Cord) plus Tel	\$92	\$67
BEL0256	Belkin Gold Series 8-Way (2m Cord) plus Tel plus AV	\$104	\$75
BEL0251	Belkin Superior Series 6-Way (2m Cord) plus Tel plus AV	\$87	\$62
BEL0253	Belkin Gold Series 7-Way (3m Cord) plus Tel plus AV plus RJ45	\$111	\$88



Belkin Wireless Rechargeable Mouse

The Rechargeable Wireless Optical Mouse from Belkin provides advanced wireless mouse functionality along with the convenience of recharging from the base. Designed for comfortable right or left handed use.



Rechargeable

Our Price \$45 **Save \$25**
WebCode: BEL9997

Belkin Wireless Slim Keyboard & Optical Mouse

- Quick and easy set-up
- Install with Plug-and-Play ease when connecting to USB
- 800dpi Optical resolution
- Provides precision, accuracy and control
- Notebook style keys for light and quiet typing



Our Price \$76 **Save \$23**
WebCode: BEL2841

Belkin 10m Version 2 Bluetooth Adaptor

Now you can add Bluetooth wireless capabilities to your USB desktop or notebook computer. The Adaptor is ideal for home or mobile use. It allows your computer to make cable-free connections to other Bluetooth devices quickly, without having to establish a networking infrastructure. Connect to your cell phones, printers, PDAs, or other computers enabled with Bluetooth technology.



Our Price \$55 **Save \$15**
WebCode: BEL6327

Visit www.csw.com.au to view our full range of Belkin Products!

Belkin Complete Mobility Bundle

Belkin's Complete Mobility Bundle is designed to meet the needs of all mobile professionals. It represents a necessary addition to any notebook solution and includes the Belkin NE MC Notebook bag, miniscroller mouse and 4 port hub all in the one pack at a value price.



Our Price \$64 **Save \$25**
WebCode: BEL2489

Wireless USB Mini Keypad

The Wireless USB Mini Keypad with calculator and wireless mouse provides improved productivity and is a smart solution for spreadsheet, accounting and financial applications that require fast and accurate entry of numeric data. The wireless technology provides a cable free workspace. Additional to the calculator functionality, multimedia applications can be controlled. The design is compact and lightweight and offers storage for the small USB receiver.



Our Price \$55 **Save \$22**
WebCode: BEL2925

Belkin Nostromo N52 Speedpad

Built to conquer your enemy, the Nostromo SpeedPad N52 captures all the advantages of its critically acclaimed predecessor, the N50, and cranks up the juice with advanced options to dominate your game. It puts keyboard and gamepad functionality into one small and easy-to-use device, delivering more tools for customising your game than ever.



Our Price \$49 **Save \$20**
WebCode: BEL2332

Belkin USB Adaptor Kit

Connect your computer to a digital camera, MP3 player, or other USB device. The Belkin 3-in-1 USB Adaptor Kit includes adapters for today's most common advanced technologies.

- The 5-Pin Mini-B Adapter
- The 4-Pin Mini-B Adapter
- The USB A-B Female Adapter
- Belkin Storage Pouch



Our Price \$11 **Save \$8**
WebCode: BEL2921

Belkin Hi Speed 15-in-1 Media Reader/Writer with 3 Port USB 2.0 Hub

- Transfers data from different media cards simultaneously
- Downloads images, music, and files up to 40 times faster than USB 1.1
- Installs and works easily with Plug-and-Play, hot swap capability
- Connects up to 3 USB 2.0 or USB 1.1 devices



Our Price \$67 **Save \$13**
WebCode: BEL0392

Belkin 7-in-1 Retractable Cable Travel Pack

Carry and organise your USB and networking cables-everywhere. The 7-in-1 cable kit from Belkin offers a great solution for the mobile professional. It gives you an easy way to connect your USB and networking devices to your notebook computer, virtually anywhere you go.



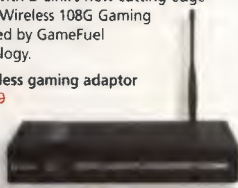
Our Price \$37 **Save \$13**
WebCode: BEL4669

See page 2 for details!
smart BUY club 3% rebate
Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy

D-Link Wireless 108G Gaming Router (DGL-4300)

Push the limits of basic networking technology and experience the evolution in networking. Wirelessly share broadband Internet, boost network performance, stay competitive in your online games with D-Link's new cutting-edge GamerLounge Wireless 108G Gaming Router, powered by GameFuel Priority Technology.

DGL-3420 wireless gaming adaptor (DLK9351) \$149

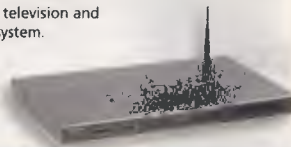


Our Price **\$278** Save **\$68**

WebCode DLK6007

D-Link Wireless Media Player (DSM-320RD)

Introducing the latest addition to D-Link's multimedia family of products: the MediaLounge DSM-320RD Wireless Media Player with DVD and 5-in-1 Card Reader. The DSM-320RD connects your home entertainment center to an existing network, allowing you to wirelessly stream music, photos and videos from the PC to your television and stereo system.



Our Price **\$510** Save **\$39**

WebCode DLK9450

D-Link Wireless 108G MIMO Router (DI-634M)

With the D-Link DI-634M wireless 108G MIMO router, you can create a robust wireless network that boasts powerful performance and extended coverage and enjoy the full benefits of wireless connectivity. You can now deploy the next-generation wireless network with dramatic performance improvements.

PCMCIA wireless card (DLK6023) \$114
PCI wireless card (DLK6022) \$139

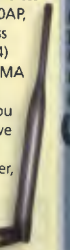


Our Price **\$246** Save **\$43**

WebCode DLK6024

D-Link 5dBi Gain Dipole Antenna (DWL-50AT)

The D-Link DWL-50AT is a 5dBi Gain Dipole Antenna with Reverse SMA connector. It can help to improve the transmit rate and extend the transmit distance of wireless access point (DWL-1000AP, DWL-900AP) or wireless gateway router (DI-714) which have a reverse SMA connector. To ensure a better performance, you should not only improve the RF on transmitter but also that on receiver, i.e. a high gain card.



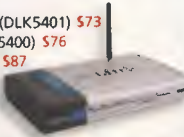
Our Price **\$30** Save **\$5**

WebCode DLK0210

108G Wireless Storage Router with USB ports (DI-624S)

Wirelessly Share a Broadband Internet Connection at speeds up to 108Mbps. Also features two USB 2.0 Ports to Connect and Share either an USB External Hard Disk Drive or Printer. 802.11g, 802.11b Compatible. Advanced Firewall and Parental Control.

PCMCIA wireless card (DLK5401) \$73
PCI wireless card (DLK5400) \$76
USB device (DLK6021) \$87



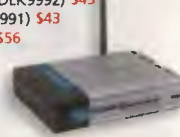
Our Price **\$190** Save **\$39**

WebCode DLK9989

54Mbps Wireless Router + USB Print Server (DI-524UP)

This 54Mbps Wireless Broadband Router also includes a Built-in USB Print Server. Built-in 4-port Fast Ethernet switch for a hard wired connection to the network. Advanced Firewall & Parental Control Easy web-based management from any browser.

PCMCIA wireless card (DLK9992) \$43
PCI wireless card (DLK9991) \$43
USB device (DLK1153) \$56



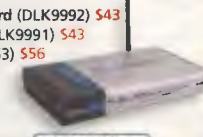
Our Price **\$123** Save **\$41**

WebCode DLK9988

D-Link 54Mbps Wireless Broadband Router (DI-524)

The DI-524 is a high-speed 2.4GHz 802.11g wireless broadband Router with a built-in 4-port Fast Ethernet Switch. It incorporates high-speed wireless LAN with speeds of up to 54Mbps. This router lets you quickly share DSL or cable modem Internet connection, with or without the network wires.

PCMCIA wireless card (DLK9992) \$43
PCI wireless card (DLK9991) \$43
USB device (DLK1153) \$56



DI-624 108Mbps Our Price **\$133** Save **\$36**
DI-524 54Mbps Our Price **\$93** Save **\$36**

WebCode DLK5403 WebCode DLK9994

VoIP Terminal Adapter (DVG-2001S)

The DVG-2001S VoIP Terminal Adapter links traditional telephony networks to IP networks with conventional telephony devices such as analog phones or fax machines. This product has one RJ-12 port to connect to a standard phone and one Ethernet port to connect to a network.



Our Price **\$97** Save **\$22**

WebCode DLK9252

D-Link 54Mbps Wireless VoIP Router (DVG-G1402S)

This 54Mbps Wireless Broadband Router allows you to make and receive voice calls over the same line that you connect to the Internet. Expensive long-distance and international phone calls over ordinary telephone services can be avoided altogether. Plug two analog phones/fax machines into two RJ-12 ports, boost network performance with QoS, and share broadband via 4-port Fast Ethernet switch or Wireless connection.



Our Price **\$256** Save **\$43**

WebCode DLK9253

D-Link GigaExpress Gigabit Switch (DGS-1005D)

Get the blazing speed of Gigabit Ethernet with the D-Link GigaExpress DGS-1005D, a 5-port 10/100/1000Mbps Gigabit Switch that delivers power, performance, and reliability in one cost-effective, space-saving design. Increase the speed of your network server and backbone connections, or make Gigabit to the desktop a reality.



Our Price **\$87** Save **\$33**

WebCode DLK0666

D-Link Indoor 5dBi Wireless Antenna (ANT24-0501)

A High-Gain omni-directional antenna designed for 2.4GHz ISM band indoor use. It can be used with 802.11b and 802.11g wireless LAN devices such as access points and remote routers. It can be connected to your wireless device through an extension cable (provided with the antenna), or directly attached to your wireless device.



7dBi wireless antenna (DLK9245) \$81

Our Price **\$67** Save **\$13**

WebCode DLK0141

D-Link Router With Built-in Switch & USB Print Server (DI-704UP)

A versatile router that combines broadband built-in Internet sharing with robust firewall security, print server and built-in 4-port switch for ready printer and workstation connection. For home and SOHO, as well as for business users looking for advanced functions, network protection and policy-based content filtering.



Our Price **\$105** Save **\$25**

WebCode DLK1115

D-Link USB/Ethernet ADSL Modem (DSL-502T)

Using ADSL technology, your Internet speeds can be up to 150 times faster than a 56K modem over a standard phone line. Two computers can simultaneously connect via the USB and Ethernet port to share its high-speed Internet connection. You can connect to its Ethernet port regardless of the operating system you are using, or connect to its USB port to allow easy installation to a USB equipped computer.



Our Price **\$75** Save **\$45**

WebCode DLK9977

D-Link ADSL Modem with 54Mbps Wireless Router (DSL-G604T)

With a built-in ADSL interface, 802.11g high-speed wireless LAN, 4 10/100BASE-TX Ethernet switch ports and advanced router functions, this device gives your business a convenient and cost-effective way to install a secure, fast network with bottleneck-free link to the outside world. The DSL-G604T is an ADSL Router designed for home or office use.



Our Price **\$146** Save **\$54**

WebCode DLK5109

D-Link 2.4GHz Wireless Range Extender (DWL-G710)

D-Link introduces the latest product in the AirPlus G family designed to increase the range of your wireless network. This Wireless Range Extender takes an existing 802.11g wireless signal and "repeats" it to enable wireless connectivity in the backyard, garage or any areas where your original wireless signal cannot reach.



Our Price **\$135** Save **\$24**

WebCode DLK9463

Engin Voice Box 1

- Connect to Engin and get some of the lowest local, national and international call rates ever.
- Convert your normal analogue phone signal to digital so it can be sent over your broadband connection.
- 30 day trial period and 1 month free service fee.



Our Price **\$149**

WebCode.....LNK1221

Engin Voice Box 2

- The Engin Voice Box series 2 connects both your existing phone line and your new Engin service through the one handset.
- Take advantage of Engin's low call rates wherever you are to make and receive phone calls to anyone anywhere worldwide.
- 30 day trial period, 1 month free service fee.



Our Price **\$229**

WebCode.....LNK1222

Linksys Cordless Internet Telephony Kit (CIT200)

- Complete cordless Internet phone solution for Skype
- Connects Skype to Skype
- Connects Skype to regular phone lines (with Skype InOut service)
- Plug and dial - easy to install and easy to use



Our Price **\$229** Save **\$10**

WebCode.....LNK5463

Linksys SRW224G4 Switch

- Optimised for growing businesses with 4 expandable Gig ports
- Secure management via SSH/SSL and secure user control via 802.1x & MAC filtering
- IGMP snooping, L2/L3 COS, queuing & scheduling makes solution ideal for Voice/Video
- Intelligent traffic management with Rate Limiting, Policing, Shaping, and Storm control

The Linksys WebView Managed switch allows you to expand your network securely. Configuration of the switch is secured using SSL for Web access and SSH for Telnet access. User control is secured using 802.1x security using a RADIUS authentication mechanism and can also be controlled using MAC filtering.

Extensive QoS features makes the solution ideal for real-time applications like Voice and Video. The 4 priority queues together with the Weighted Round Robin and Strict Priority scheduling techniques facilitate efficient co-existence of real-time traffic with data traffic allowing them each to meet their QoS needs.



Our Price **\$449** Save **\$90**

WebCode.....LNK1228

Linksys SRW224P PoE Switch

- Delivers reliable power over 10/100 Ethernet ports using IEEE 802.3af standard
- Secure management via SSH/SSL and secure user control via 802.1x & MAC filtering
- IGMP snooping, L2/L3 COS, queuing & scheduling makes solution ideal for Voice/Video
- Intelligent traffic management with Rate Limiting, Policing ACLs, and Storm control

The Linksys WebView Managed switch allows you to expand your network securely. Configuration of the switch is secured using SSL for Web access. User control is secured using 802.1x security using a RADIUS authentication mechanism and can also be controlled using MAC filtering.

Extensive QoS features makes the solution ideal for real-time applications like Voice and Video. The 4 priority queues together with the Weighted Round Robin and Strict Priority scheduling techniques facilitate efficient co-existence of real-time traffic with data traffic allowing them each to meet their QoS needs. Individual users or applications can be prioritised above others using various Class of Service options - by port, layer 2 priority (802.1p), Layer 3 priority (TOS or DSCP). Intelligent Broadcast and Multicast storm control minimises and contain the effect of these types of traffic on regular traffic.



Our Price **\$824** Save **\$176**

WebCode.....LNK5523

Linksys Compact Wireless-G Broadband Router (WRT54GC)

- All-in-one Internet-sharing Router, 4-port Switch, and Wireless-G (802.11g) Access Point
- Shares a single Internet connection and other resources with Ethernet wired and Wireless-G and B devices
- Compact form factor fits in anywhere
- High security: Wi-Fi Protected Access (WPA/WPA2 Personal), wireless MAC address filtering, powerful SPI firewall



Our Price **\$99** Save **\$40**

WebCode.....LNK5455

Linksys Wireless-G Notebook Adapter (WPC54G)

- High-speed Wireless-G (802.11g) networking for your notebook computer
- Data rates up to 54Mbps - 5 times faster than Wireless-B (802.11b)
- Also interoperates with Wireless-B networks (at 11Mbps)
- Advanced wireless security: Wi-Fi Protected Access (WPA), and up to 256-bit encryption



Our Price **\$65** Save **\$24**

WebCode.....LNK0008

Linksys Wireless-G Broadband Router (WRT54G)

- All-in-one Internet-sharing Router, 4-port Switch, and Wireless-G Access Point
- Wireless data rates up to 54Mbps - 5 times faster than Wireless-B (802.11b)
- Shares a single Internet connection and other resources with Ethernet wired and Wireless-G clients
- Also interoperates with Wireless-B Devices



Our Price **\$115** Save **\$44**

WebCode.....LNK0009

Linksys Wireless-G PCI Card (WMP54G)

- Wireless-G (802.11g) connectivity for your desktop PC
- Incredible data rates up to 54Mbps in the 2.4GHz radio band
- Also interoperates with Wireless-B (802.11b) networks at 11Mbps
- Put your PC wherever you want, with no cabling hassle



Our Price **\$65** Save **\$24**

WebCode.....LNK0007

Linksys ADSL Gateway (WAG54GP2)

- ADSL2+ Modem, Internet-sharing Router, 4-Port Switch and Wireless-G Access Point in one box
- High-speed ADSL2+ Modem gives you a fast, "Always On" connection to the Internet
- Connect your home PCs and other wireless devices to the Gateway and the Internet using the built-in Wireless-G Access Point, or connect directly with the 4-port Ethernet Switch
- Two standard phone jacks enable feature-rich telephone service over your DSL Internet connection



Our Price **\$259** Save **\$41**

WebCode.....LNK1225

Linksys Wireless-G ADSL Gateway (WAG54G)

- High-speed ADSL2 or ADSL2+ Modem gives you a fast, "Always On" connection to the Internet
- Connect your PCs via the built-in Router and 4-port Switch to jump start your Ethernet network and share the Internet throughout your household
- Built-in Wireless-G (802.11g) Access Point also lets you connect without running wires



Our Price **\$179** Save **\$50**

WebCode.....LNK0075

Linksys Wireless-G Internet Sharing Router (WRT54GS)

- Internet-sharing Router, 4-port Switch, and performance enhanced Wireless-G Access Point
- Shares a single Internet connection and other resources with Ethernet wired, Wireless-G, -B, and SpeedBooster devices
- New SpeedBooster technology increases wireless network performance by up to 35%



Our Price **\$164** Save **\$26**

WebCode.....LNK0111

Linksys Wireless-G Network Adaptor (WPC54GS)

- High-speed Wireless-G networking for your notebook computer, now with SpeedBooster performance enhancement
- New SpeedBooster technology increases Wireless-G performance by up to 35%
- Also interoperates with standard Wireless-G and Wireless-B networks
- Wireless communications secured with up to 128-bit encryption



Our Price **\$112** Save **\$18**

WebCode.....LNK0112

Netgear RangeMax 240 Wireless Router (WPNT834)

Delivering wireless connectivity at wired speeds – up to 14x greater speed and 10x more coverage than traditional wireless solutions. Powered by 240Mbps of speed, the RangeMax router delivers on-demand bandwidth for video streaming, gaming, VoIP, and backing up network files. Advanced MIMO technology adjusts to interference on-the-fly, eliminating “dead spots” and ensuring whole home coverage.



Our Price \$277 **Save \$62**
WebCode.....NTG7596

Netgear RangeMax 240 Wireless Notebook Adapter (WPNT511)

Delivering wireless connectivity at wired speeds – up to 14x greater speed and 10x more coverage than traditional wireless solutions. Powered by 240Mbps of speed, the RangeMax 240 wireless adapter delivers on-demand bandwidth for video streaming, gaming, VoIP, and backing up network files. Advanced MIMO technology eliminates “dead spots” and ensuring whole home coverage.



Our Price \$181 **Save \$38**
WebCode.....NTG7595

Netgear Gigabit Ethernet Switch (GS608)

This sleek, affordable powerhouse lets you build a small scale, high-speed network that moves even very large files across your network instantly. It allows you to mix-and-match 10/100/1000 Ethernet devices for flexibility and seamless migration to Gigabit Ethernet. Packed with ease-of-use features, it's also self-cooling and operates quietly without a fan.

GS605 Gigabit Ethernet Switch (NTG7187) \$92



Our Price \$147 **Save \$32**
WebCode.....NTG7186

Verbatim High Speed 11 in 1 Card Reader

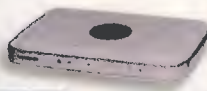
The 11 in 1 Card Reader allows you to access information stored on any of the following memory cards: Secure Digital, miniSD, MultiMedia, Reduced Size MultiMedia, SmartMedia, CompactFlash (type I & type II), Memory Stick, Memory Stick PRO, Memory Stick Duo and Microdrive.



Our Price \$29 **Save \$6**
WebCode.....VBM7195

Netgear RangeMax ADSL Modem Wireless Router (DC834PN)

NETGEAR's RangeMax Wireless Router is powered by 6 smart antennas which adapt on-the-fly to interference, eliminating dead spots and delivering up to 5x more wireless coverage and speed than 802.11g. RangeMax MIMO (Multi-In, Multi-Out) technology is 100% 802.11b/g compatible and provides legacy devices with up to 50% improvement in performance.



Our Price \$267 **Save \$62**
WebCode.....NTG7582

Netgear Super G Wireless ADSL Router with 4-port switch (DC834CT)

Lets you instantly and safely download large files, videoconference, and distribute and play high-quality digital movies, photos, and MP3s. Protects your network against intruders. Super G for extra speed and range.



Our Price \$225 **Save \$64**
WebCode.....NTG7301

Netgear Storage Central (SC101)

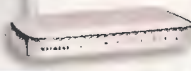
Plug in up to 2 IDE drives of any size and create a Central Storage space for all your music, video, photos, games, and files that is accessible by all the PCs on your network. Keep your most valuable files safe with advanced, automatic backup features, and keep them private from other network users if desired.



Our Price \$185 **Save \$54**
WebCode.....NTG7350

Netgear Wireless Print Server with 4-port Switch (WGPS606)

Connect up to two printers to your wireless network with the NETGEAR WGPS606 and place them at convenient locations in your home, enabling you to place your printers at any convenient location in your home. For real savings, you can connect up to four PCs or game consoles without new wireless adapters. Setup's a breeze with Smart Wizard configuration assistant.



Our Price \$172 **Save \$57**
WebCode.....NTG7314

Netgear ACE Configured Broadband Voip Adapter (TA612V)

NETGEAR's TA612V Broadband Voice Adapter lets you experience fast network connectivity and has built-in a phone adapter that delivers convergent voice services (VoIP) to your home networking environment. Powerful, secure, private, and easy to use, but best of all, it helps save money on phone calls with VoIP phone service.



Our Price \$145 **Save \$34**
WebCode.....ACE0001

Netgear Broadband VOIP Adapter With 1 Phone Port (WGR613V)

Integrated Firewall, Router, DHCP and PPPoE Client.

- 1 VoIP ports (POTS) for connection to a standard telephone. Allowing two separate phone numbers and accounts with your VSP.
- Quality of Service (QoS) on Voice Call through Prioritisation of Voice data.
- WAN port for Connection to your existing broadband Modem.
- 3 x LAN ports for connection to your existing network.
- 802.11G 54MB Wireless Access Point.



Our Price \$189 **Save \$40**
WebCode.....NTG7611

Netgear 54 Mbps Wireless Router and PC Card Kit (WCB511BDL1)

This complete kit sets you free to take your notebook computer anywhere without being tied to Ethernet cables. Enjoy broadband Internet connection sharing and access to network resources at up to 54 Mbps. Double Firewall provides superior protection from hackers. High-level encryption ensures confidentiality and prevents unauthorised access to your network.



Our Price \$99 **Save \$20**
WebCode.....NTG7071

Netgear Gigabit PCI Adapter (GA311)

Transfers even huge video, CAD, and database files at astonishing speeds. Up to 10 times faster than Fast Ethernet and 100 times faster than 802.11b wireless, it easily and instantly connects you to other networked computers, printers, routers, and network storage. Easy installation requires fewer than five mouse clicks.



Our Price \$28 **Save \$11**
WebCode.....NTG7154

Netgear ProSafe VPN Firewall 8 with 4 Port 10/100 Mbps Switch (FVS114)

Compact FVS114 ProSafe VPN Firewall 8 offers strong encryption, 8 IPSec VPN connections, SPI firewall, intrusion detection, URL filtering, and more. SNMP, Smart Wizard, VPN Wizard simplify set up and use. Compatible with leading VPN devices, including Cisco, Juniper/Netscreen, Checkpoint; works with all major operating systems. Optimised for ProSafe VPN Client Software and NMS100.



Our Price \$139 **Save \$30**
WebCode.....NTG7353

Verbatim DVD-R Movie Reel Video Case 3PK

Verbatim's new Digital Movie DVD is so hot you can almost taste the popcorn. These 4.7GB discs look, and even feel, like a Hollywood movie reel. But don't think you need a director's chair to use them. These mini reels are perfect for home movies, business presentations and transferring files.



Our Price \$5
WebCode.....VBM4728

Excel DVD-R 8X 50pc Spindle

The ideal choice for high resolution video and images. Create, edit and archive home movies & digital photos while storing and accessing data from one disc. DVD-R discs capture 4.7GB. Printable surface.



Our Price **\$21** Save **\$14**
WebCode.....EXC0001

Century CD/DVD 100 Disk Storage

The safe and convenient way to store and retrieve your important data and entertainment. Provides 100 disc capacity per CCD unit.



Our Price **\$66** Save **\$33**
WebCode.....GDS0001

Century CD Add On Stacking Unit

This is the stacking version of the Century CD storage device. A total of 10 Units can be stacked to store 1000 disks. Stacking units do not have power cords as the base unit generates the power up through power sockets located on the top of each unit where they connect.



Our Price **\$55** Save **\$33**
WebCode.....GDS0002

HP LaserJet 3050 all-in-one printer

With HP's known reliability and quality, the LaserJet 3050 brings 4 in 1 functionality (fax, print, scan, copy) to provide a space saving solution for business and home users. The LaserJet 3050 All-in-One is a joy to use with an easy to follow control panel which has a simple, 2-line, 16-character backlit display that requires no training. HP offers a variety of support options to assist you in the setup and maintenance of the HP LaserJet 3050 AIO. HP's expert knowledge will help you make the most of your All-in-One and ensure your equipment is running at peak efficiency. You will start with a one-year, limited warranty, backed by free telephone support from the award-winning HP Customer Care. Print:

- 18ppm, First page out less than 8 sec, 1200 x 1200 dpi 264MHz, 64MB RAM

Copy:

- 600 x 600 dpi, 24 bit depth

Scan:

- 600 x 600 dpi (up to 19,200 dpi enhanced)

Fax:

- V.34 fax modem - 33.6 kbps

Our Price **\$445** Save **\$54**
WebCode.....HPL6504



HP LaserJet 3052 All-in-one Printer

- Print: 18ppm, first page out less than 8 sec, 1200 x 1200 dpi 264MHz, 64MB RAM
- Copy: Flatbed 600 x 600 dpi, 24 bit depth
- Scan: 600 x 600 dpi optical resolution (9600 dpi enhanced) colour scanning



Our Price **\$536** Save **\$63**
WebCode.....HPL6520

HP LaserJet 3055 All-in-one Printer

- Print: 18ppm, first page out less than 8 sec, 1200 x 1200 dpi 264MHz, 64MB RAM
- Copy: Flatbed 600 x 600 dpi, 24 bit depth
- Scan: 600 x 600 dpi optical resolution (9600 dpi enhanced) colour scanning
- Fax: 33.6kbps



Our Price **\$670** Save **\$151**
WebCode.....HPL6530

HP LaserJet 3390 All-in-one Printer

- Print: 21ppm, first page out less than 10 sec, 1200 x 1200 dpi 264MHz, 64MB RAM
- Copy: Flatbed 600 x 600 dpi, 24 bit depth
- Scan: Flatbed 1200 x 1200 dpi (up to 19,200 dpi enhanced)
- Fax: V.34 fax modem - 33.6 kbps



Our Price **\$989** Save **\$101**
WebCode.....HPL6500

HP LaserJet 1020 Mono Printer

- Up to 15 ppm (letter), 14 ppm (A4)
- Less than 10 seconds with Instant-on Technology
- 1200 dpi effective output quality
- 234 MHz Processor
- Memory 2 MB RAM
- 5,000 pages per month duty cycle



Simple. Compact. Affordable.
Our Price **\$199** Save **\$44**
WebCode.....HPL5911

HP LaserJet 1022 Mono Printer

- Up to 19 ppm letter (up to 18 ppm A4)
- Less than 8 seconds with Instant-on Technology
- 8,000 pages per month duty cycle
- Processor 266 MHz
- Memory 8 MB RAM
- True 1200 dpi



Professional Laser results.
Our Price **\$281** Save **\$60**
WebCode.....HPL5912

HP LaserJet 1320 Mono Printer

- Up to 22 ppm, letter (up to 21 ppm, A4)
- 1200 dpi resolution
- 133 MHz Motorola V4 Coldfire processor
- 16 MB RAM, expandable to 144 MB with one open, industry-standard, 100-pin DIMM slot
- 10,000 pages per month



Fast, expandable, network-capable
Our Price **\$531** Save **\$114**
WebCode.....HPL5927

HP LaserJet 2420 Mono Printer

- Print speed of up to 30 ppm (letter), 28 ppm (A4)
- 32 MB RAM, expandable to 288 MB
- 100-sheet multipurpose tray
- 250-sheet input tray



Reliable. Easy-to-use
Our Price **\$1051** Save **\$213**
WebCode.....HPL6456

HP LaserJet 2600n Colour Printer

- 8 ppm A4 black & colour
- 600 x 600 dpi
- 35,000 pages per month duty cycle
- 1 USB 2.0 port
- 1 built in Fast Ethernet wired networking port
- 16MB Memory



Our Price **\$562** Save **\$235**
WebCode.....HPL6455

HP Colour LaserJet 2840 AIO

- Your 3-in-1 business centre for professional colour laser print, copy and scan (network-ready)
- 19ppm mono and 4ppm colour
- 50 sheet Automatic Document Feeder, 125 sheet multi purpose tray, optional 250 sheet second tray
- 96MB RAM, 264MHz processor
- 600 x 600 dpi with ImageREt 2400
- Friendly LED screen



Our Price **\$1541** Save **\$327**
WebCode.....HPL3905

Lexmark C524n

Fast paced colour printing for the fast paced office

• Fast in black and colour: Print professional, high quality, duplex (two-sided) colour documents with 4800 Colour Quality at up to 19 ppm with a time to first print as fast as 13 seconds via a 500 MHz processor with 128MB RAM standard, expandable to 640MB.

Easy to Use: Front access for easy replacement of toner cartridges and paper. Intuitive operator panel with graphical 'Show Me' to assist in keeping your printer up and running.

Colour Control: ColorCare Technology with ColorSaver™, 3 levels of colour and monochrome toner saver, Mono Only Driver, Black and White Lock, Colour Print Permissions and Proof then Print.



Purchase a C524n & receive a Mono Laser printer (E120n) FREE

Our Price **\$1132** Save **\$215**
WebCode.....LEX5240

Lexmark X422 MFP

Small Workgroup MFP Solution - Fast and Affordable.

The Lexmark X422 MFP is a compact, space saving, 10/100BaseTX Ethernet-ready MFP with print, copy, fax and scan all in one device.

- Print / Copy: Up to 22 ppm A4
- Print: 600 x 600 dpi; Scan: 600 x 600 dpi mono, 300x 300 dpi colour
- Print / Copy: Less than 10 second time to first page
- 10/100BaseTX Ethernet-ready and USB 2.0 Full Speed-ready
- 128MB memory
- 50 Sheet Automatic Document Feeder (ADF)



Purchase a X422MFP & receive a Mono Laser printer (E120n)FREE

Our Price **\$1531** Save **\$273**
WebCode.....LEX1422

Lexmark E120n

Affordable and Reliable Printing where space is a premium

- Up to 20 ppm (Letter), 19 ppm (A4)
- 600 x 600 dpi, 1200 Image Quality
- As fast as 8 seconds time to first page
- 16MB memory standard
- PCL 6 emulation standard
- Ethernet-Ready 10/100BaseTX



Our Price **\$235** Save **\$52**
WebCode.....LEX2404

Lexmark X8350 Printer

Office All-in-One Plus Photo

All-in-One Plus Photo combines broad office functionality with high-quality photo capability, helping you do more, with truly professional results.

- 25 ppm black & 19 ppm colour
- 5,000 pages per month duty cycle
- Scan up to 19200 x 19200 dpi
- 4800 x 1200 dpi
- Copy Up to 50 pages 75 gsm bond
- 1 USB port & 1 PictBridge



Our Price **\$296** Save **\$53**
WebCode.....LEX8350

Lexmark X215 MFP Printer

Affordable multifunction laser printer for small office and desktop. Print, copy, fax and colour scan

- Up to 16 ppm print or copy
- Print: 600 x 600 dpi; Scan: 4800 x 4800 dpi Interpolated
- Less than 12 second time to first page
- Parallel and USB connectivity
- 16MB memory
- 250 sheet input capacity, 30 Sheet Auto Document Feeder (ADF)



Our Price **\$496** Save **\$88**
WebCode.....LEX9215

Lexmark T430dn

Ideal for Small Workgroups

- Small footprint and height saves space
- Fast 366MHz processor
- 30ppm & 8 secs to first print
- Standard Duplex

Purchase a T430n & receive a Mono Laser printer (E120n) FREE



Our Price **\$1558** Save **\$277**
WebCode.....LEX1432

Lexmark X646e MFP

Print, Copy & Scan
Easy-to-use, integrated Multifunction Printer with a colour touch screen that lets you manage documents

- Print technology: Monochrome Laser
- Print speed: 48ppm
- Time to first page: 8.5 seconds
- Resolution: 600 x 600 dpi, 1200 x 1200 dpi, 1200 Image Quality, 2400 Image Quality
- Connectivity standard: USB and Ethernet
- Compatibility: PCL 6 Emulation, PostScript 3, Personal Printer Data Stream (PPDS) Migration Tool, PDF v1.5 Emulation
- Direct print formats: JPEG, TIFF, GIF, BMP, PNG, PCX, DCX, PDF, HTML



Purchase a X646e & receive a colour Laser printer (C510n) FREE

Our Price **\$4848** Save **\$866**
WebCode.....LEX0376

Lexmark E240n

Powerful, Compact and Very Affordable

- Up to 26 ppm (A4)
- 2400 Image Quality
- As fast as 8 seconds time to first page
- 16MB memory standard and 366 MHz processor
- Optional 550-Sheet Drawer
- PCL 6 emulation standard



Our Price **\$382** Save **\$67**
WebCode.....LEX2402

Lexmark C920dn

Fast, High Quality, Wide Format Colour Printer for High Volume Business Applications

- Extensive media range for specialty applications
- Up to 36 ppm in black and 32 ppm in colour
- 9.5 seconds in black and 13.5 seconds in colour
- 1,000 MHz processor with 256 MB RAM standard

Purchase a C920dn & receive a colour Laser printer (C522n) FREE



Our Price **\$7603** Save **\$1351**
WebCode.....LEX7921

Kodak i40 scanner

You want EASY. You want FAST. You want GREAT IMAGES. Get everything you want from a small desktop scanner- and more.

- Simplex/Duplex Scanner with 50 page ADF
- Up to 25 pages per minute in Bitonal and Colour.
- Scan small or thick documents
- PerfectPage Image Processing built in- Renowned image quality from Kodak



Our Price **\$1595** Save **\$300**
WebCode.....KOD0015

Panasonic KVS-2026cu scanner

The reliable choice for colour document duplex scanning. Suitable for any workgroup use where high durability with high-tech image processing, yet compact-sized equipment are required.

- 23ppm b/w, 10ppm colour - full colour simplex scanning
- 40ppm b/w, 16ppm colour - full colour duplex scanning
- RTIV (Reliable Throughput Imaging Viewer) - standard Panasonic software
- USB 2.0 Ultra SCSI interface - dual port support



Our Price **\$3597** Save **\$401**
WebCode.....PAN0058

Fujitsu ScanSnap

The ScanSnap fi-5110EOX is a true compact, one-touch solution, which enables you to scan directly to PDF, email or file with the touch of a button.

- Scan 15 double-sided pages per minute
- Automatically eliminate blank pages
- Automatic de-skew, image rotation and paper size detection



Our Price **\$878** Save **\$121**
WebCode.....FUJ0037

Click'n Go e-Business Starter Pack

Already a well-known name in the domain name and web hosting market, Click'n Go is now able to offer businesses the total package to get them on the web easily at an affordable price. This e-business starter pack includes:

- A .au domain name (www.yourbusinessname.com.au)
- Website builder tools, including easy-to-use tools to help you create your own website
- Unlimited web builder program access
- 100Mb disk space
- 20 email addresses
- Unlimited data transfers per month
- Unlimited mail redirections
- FREE Anti-spam for email
- FREE Anti-Virus for email
- Access to Click'n Go support team.



Our Price \$139 **Save \$10**
WebCode.....CL0001

magiKLEEN LCD Screen Cleaner & Micro Fibre Cloth

magiKLEEN is an exciting new product that will give a perfect finish to any Optical, LCD or Plasma screen appliance. It is also suitable for Perspex and other surfaces. 100% Australian owned and environmentally friendly - you will be amazed with the results.



Our Price \$22 **Save \$8**
WebCode.....MAG1000

Epson Stylus CX3700 Economical All-in-one with individual ink cartridges

- Epson DURABrite ink for improved print quality & durability
- Absolute versatility with support for a broad range of Epson media
- Offers the versatility to zoom or enlarge when photocopying
- True Borderless edge-to-edge printing and copying up to A4
- 5760 x 1440 Optimised dpi with Epson's Resolution Performance Management Technology
- Vibrant photos on plain or Genuine Epson specialty papers that last up to 120 years
- Individual Intellidrive ink cartridges for greater economy
- Hi-res scanning up to 600 x 1200 dpi
- Borderless one touch copying
- Powerful & easy to use bundled software



Our Price \$118 **Save \$19**
WebCode.....EPI3700

Epson Stylus Photo RX530 Photo Quality Multi-Function Printer

- Built-in 1.5-inch image viewer
- True borderless edge to edge printing
- Extensive standalone photograph printing features and options
- High resolution 2400 x 2400 film scanning
- Standalone colour and black-and-white photocopy functionality
- 5760 x 1440 Optimised dpi using Resolution Performance Management technology
- PictBridge and USB Direct Printing support
- Individual Intellidrive ink cartridges for even greater economy
- Epson Creativity Suite for easy photo printing and file management
- Versatile with a broad range of media, including Glossy 5" x 7" paper



Our Price \$290 **Save \$56**
WebCode.....EPI0530

Epson Stylus CX5700F Affordable All-in-one Print, Copy and Faxing solution

- Built-in colour fax functionality
- Standalone colour and black-and-white photocopy functionality
- Epson DURABrite Ultra ink for improved print quality and durability
- Individual Intellidrive ink cartridges for even greater economy
- Powerful and easy-to-use bundled software
- PictBridge and USB Direct Printing support
- 5760 x 1440 Optimised dpi with Resolution Performance Management Technology
- Vibrant photos on plain or Genuine Epson specialty papers that last up to 120 years
- Simple plug and print connectivity
- True BorderFree edge-to-edge photo printing and copying on A4, 4" x 6" and 5" x 7"



Our Price \$276 **Save \$43**
WebCode.....EPI5700

Epson Stylus Photo RX650 Powerful & Advanced All-in-one Photo Center with CD Printing

- Built-in 2.5-inch Photo Fine technology colour LCD photo viewer
- Direct copy and print CD/DVD designs with compatible discs
- Extensive standalone photograph printing features and options
- Six individual Intellidrive ink cartridges
- High resolution 3200 x 6400 Matrix CCD scanner with built-in transparency unit
- Advanced Micro Piezo print head with 90 nozzles per colour for enhanced speed
- 5760 x 1440 Optimised dpi using Resolution Performance Management Technology
- Standalone colour and black-and-white photocopy functionality



Our Price \$432 **Save \$90**
WebCode.....EPI0650

Epson Stylus CX4100

- Economical individual ink cartridges
- 5760 x 1440 optimised dpi
- Hi-res scanning (1200 x 2400 dpi)
- High speed, up to 18 copies per minute in black and white
- Epson DURABrite Ultra ink
- PictBridge and USB direct printing support
- True borderless edge to edge printing



Our Price \$138 **Save \$27**
WebCode.....EPI4101

Epson Stylus Photo R230

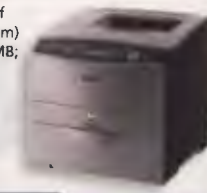
- 5760 x 1440 optimised dpi
- True borderless edge to edge printing
- Six individual ink cartridges
- CD/DVD printing
- Quick 15ppm for colour and black and white text pages.



Our Price \$175 **Save \$34**
WebCode.....EPI0230

Epson Aculaser C1100 Colour Laser Printer

- Superior High Quality Colour Printing
- Print Speeds of 25ppm B/W, 5ppm Colour
- Great print resolution at 600dpi
- Flexible Interfaces, Parallel and USB
- Networking model: AL-C1100N
- Paper Capacity of 180 sheets (80 gsm)
- Memory STD: 32MB; Max: 256MB



Our Price \$657 **Save \$322**
WebCode.....EPL1113

Epson Stylus CX4700

- Individual ink cartridges
- 5760 x 1440 optimised dpi
- Hi-res Scanning (1200x2400 dpi)
- 3 Memory card slots for 12 card types
- Vibrant Photos on plain or specialty papers that last up to 120 years
- True borderless edge to edge printing
- High speed copies



Our Price \$182 **Save \$38**
WebCode.....EPI4700

Epson Stylus Photo R350

- Built in 2.4" colour LCD preview screen
- Card Slots & PictBridge for PC free printing
- CD/DVD printing
- 6 Individual ink cartridges
- True borderless edge to edge printing
- 5760 x 1440 optimised dpi



Our Price \$307 **Save \$34**
WebCode.....EPI0350

Epson Aculaser CX11NF Colour Multi-Function

- High speed printing at up to 25ppm (mono) and 5ppm (colour)
- Full faxing capabilities with 60 speed dials
- Optical scanning resolution up to an enhanced 9600dpi
- Auto Document Feeder
- Sharp text and images a print resolution of 2400dpi



Our Price \$1478 **Save \$271**
WebCode.....EPL0012

Fuji Xerox DocuPrint 203A A4 Mono Laser Printer

- Print Speed 20ppm
- Resolution: HQ1200 (2400 x 600 dpi) print resolution
- First page out time less than 10secs
- Connectivity: USB 2.0 Full Speed, IEEE 1284 Parallel
- Memory Size of 8MB

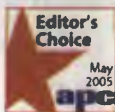
DocuPrint 204A
(FXP0204) **\$284**



Our Price \$142 **Save \$21**
WebCode: FXP0203

Fuji Xerox DocuPrint C525 A A4 Colour Laser Printer

- Black Print Speed 25ppm
- Colour Print Speed 5ppm
- First Page Out 9 Sec
- Black 17 Sec Colour
- Memory Size 64MB
- Max Duty Cycle 45,000 ppm
- Resolution 9600 x 600 image enhancement
- Paper capacity 250 sheets Std / 950 Max



Our Price \$663 **Save \$134**
WebCode: FXP0525

Fuji Xerox Phaser 8500DN A4 Colour Solid Ink Printer

- Print speed of 24 ppm
- First page out in 6 seconds
- Resolution: 1200 FinePoint TM, 600 x 600 dpi.
- Memory of up to 256MB
- Adobe PostScript 3 and PCL5c.
- Up to 85,000 pages /maximum monthly duty cycle.
- Duplex printing



Our Price \$1890 **Save \$744**
WebCode: FXP8510

Canon Papers

- Canon 6 x 4" Glossy Photo 20 Sheet (CAN0103) **\$10**
- Canon 7 x 5" Glossy Photo 20 Sheet (CAN0162) **\$14**
- Canon A3 106gsm 20 Sheet (CAN0111) **\$10**
- Canon A3 Photo Quality 165gsm (CAN0194) **\$23**
- Canon A3 245gsm 10 Sheet (CAN0113) **\$35**
- Canon A4 Glossy Photo 165gsm (CAN0173) **\$14**
- Canon A4 110gsm 200 Sheet (CAN0080) **\$33**

Epson Papers

- Epson 150 x 100, 50 Sheet (EPA1735) **\$14**
- Epson 150 x 100, 50 Sheet (EPA1729) **\$16**
- Epson 6 x 4" Glossy Photo 20 Pack (EPA1706) **\$9**
- Epson A3 Photo 20 Sheet (EPA2007) **\$88**
- Epson A3 251gsm 20 Sheet (EPA2006) **\$101**
- Epson A4 245gsm 20 Sheet (EPA5065) **\$34**
- Epson A4 Double Sided Matte 178gsm 50 Sheet (APA5063) **\$30**

HP Papers

- HP A4 Semi Gloss 170gsm 100 Sheet (HPD2511) **\$19**
- HP A3 Laser Photo Glossy 200 Sheet (HPD6548) **\$59**
- HP A3 91gsm 100 Sheet (HPD1937) **\$45**
- HP A4 Semi Gloss 170gsm 40 Sheet (HPD2143) **\$21**
- HP A4 Laser Photo Glossy 200 Sheet (HPD6547) **\$39**
- HP A4 Laser Photo Matte 100 Sheet (HPD6550) **\$20**

Kodak Papers

- Kodak 4 x 6" 100 Sheet (KOD0243) **\$18**
- Kodak 4 x 6" 40 Sheet (KOD0555) **\$14**
- Kodak A3 220gsm 25 Sheet (KOD6082) **\$39**
- Kodak A4 100 Sheet (KOD3293) **\$35**
- Kodak A4 165gsm 20 Sheet (KOD6695) **\$10**

Fuji Xerox WorkCentre C2424DN Colour MultiFunction

- Internal Hard Disk of 40GB (standard)
- Print speed of 24 ppm
- First print page out in 6 seconds
- Resolution: 2400 FinePoint™, 600 x 600 dpi.
- Memory of up to 1GB
- First copy out in 15 seconds in full colour
- Scan to mailbox, Scan to TWAIN, Scan to PC
- Scans up to 20 ppm



Our Price \$3680 **Save \$595**
WebCode: FXP2424

Fuji Xerox DocuPrint C2535A A4 Colour Laser Printer

- Black Print Speed 35ppm
- Colour Print Speed 25ppm
- Memory Size 128MB upgradeable to 640MB
- Max Duty Cycle up to 90,000ppm
- Resolution Up to 1200 x 1200 dpi
- Paper capacity 700 sheets Std / 2350 Max
- Very low Cost per Print (CPP)



Duplex and network ready with uncompromised reliability & performance

Our Price \$1998 **Save \$1516**
WebCode: FXP2535

Konica Minolta PagePro 1390MF

Professional, streamlined businesses are all about efficiency. This is where the PagePro 1390MF comes in handy. Combining monochrome laser printing, copying, faxing & colour scanning in one unit, there's no need for 4 separate machines - saving you time, money, and valuable office space.

- All-in-one print, copy, scan and fax system
- Print speed up to 20 ppm, A4
- Copy speed up to 20 cpm
- Resolution 600 dpi (print/copy), 1200 dpi (scan)
- 32 MB RAM standard memory
- Microsoft Windows
- USB 2.0 Hi Speed
- Automatic document feeder
- 1 year replacement warranty

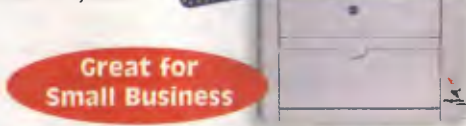


Our Price \$515 **Save \$44**
WebCode: QMS5934

Konica Minolta magicolor 2400W

Personal colour laser. This small, fast and cost effective printer is a welcome addition to any team. It is designed to be easier to use, and to run with less consumables. The polymerised toner creates outstanding print quality, and the revolutionary design also reduces waste.

- 5ppm colour
- 20ppm monochrome
- 2400 x 600 dpi
- Hi-speed USB 2.0 interfaces
- Windows Print System



Great for Small Business

Our Price \$574 **Save \$175**
WebCode: QMS2400

Konica Minolta magicolor 2430DL

Connect your digital camera directly to this printer. Imagine a compact colour laser printer that everyone can share! Whole workgroups can benefit from cost effective colour printing with the magicolor® 2430 DeskLaser. It is exceptionally easy to use and integrates direct photo print for fast and easy printout of pictures.

- Up to 20ppm mono, 5ppm colour
- 10/100BaseTX Ethernet® & USB 2.0 (high Speed) interfaces
- 2400 x 600 dpi resolution
- 200-sheets input standard /700-sheets input maximum
- Direct Photo Print
- Windows® & Macintosh® compatible
- 2 year on site warranty



Our Price \$647 **Save \$252**
WebCode: QMS2430

Konica Minolta magicolor 5430DL

High speed network colour laser. The magicolor 5430DL is a professional solution ideal for creatively communicating in colour! Konica Minolta's pioneer Polymerised toner combined with the high precision 2400dpi PRISMLASER technology allows you to produce business reports, charts, booklets, spreadsheets, flyers and stationery in stunning colour. From now on your business documents will be easily available, on demand and just-in-time at lower cost!!

- 20ppm colour, 20ppm A4 monochrome
- 64MB RAM (576MB Max)
- 2400 x 600 dpi resolution
- A4, letter, legal page sizes
- Ethernet (10/100BaseTX) & hi-speed USB 2.0 interfaces
- Windows Server 2003/XP/2000/NT4/ME/98, Macintosh OSX v10.2+ compatible & Linux



Our Price \$1432 **Save \$567**
WebCode: QMS5430



Business Printers

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 3 Year Warranty

Sennheiser HD212PRO Closed Stereo Monitoring Headphone

The HD 212 Pro closed dynamic hi-fi stereo headphones have a balanced sound image with a slight emphasis on the bass response. DJs will like their excellent attenuation of ambient noise and the soft, comfortable ear pads.



Our Price **\$110** Save **\$20**
WebCode.....SNH0006

Digimate Portable Card Reader with 40GB HDD

The ultimate companion! Reads 9 memory card types and ensures quick transfer of data, images etc to your hard disk. Free up memory on your memory card to enable you to take more photos with your Digital camera. 3hrs charging time with Lithium-Ion battery.



Our Price **\$225** Save **\$25**
WebCode.....ANY0189

Creative Audigy 4 Pro

Audigy 4 Pro is an amazing fusion of Entertainment and Music Creation. Featuring ultra-high quality DACs and an External I/O Hub which provides 6 Stereo Inputs/6 Stereo Outputs, Audigy 4 Pro enables amazingly clean recording of six channels at 24-bit/96kHz with low latency ASIO 2.0 support



Our Price **\$435** Save **\$65**
WebCode.....CRE0052

Canon Pixma IP1600 A4 Inkjet Printer

- 2 picolitre FINE technology for sharper image quality
- ChromaLife 100 ink for long-lasting photos
- Print at up to 4800 x 1200 dpi resolution
- Borderless photo printing up to A4
- Prints documents at up to 19 ppm black and 16 ppm colour



Our Price **\$69** Save **\$10**
WebCode.....CAN0417

Canon Pixma MP150 Multifunction Machine

- 2 picolitre FINE print-head technology, providing up to 4800 x 1200 dpi printing
- ChromaLife 100 ink for long-lasting photos
- Print and copy up to 22 black & 17 ppm colour
- Borderless photo printing up to A4
- USB 2.0 Hi-Speed data transfer
- Scan at up to 1200 x 2400 dpi
- Digital camera printing



Our Price **\$105** Save **\$14**
WebCode.....CAN0438

Canon Pixma IP4200 A4 Inkjet Printer

- 1 picolitre FINE print-head technology
- ChromaLife 100 ink for long-lasting photos
- Up to 9600 x 2400 dpi print resolution
- Prints directly onto printable CD and DVDs
- Borderless photo printing up to A4
- Individual ink tanks with photo black for improved image contrast
- Digital camera printing
- Auto duplex printing



Our Price **\$179** Save **\$20**
WebCode.....CAN0419

Canon Pixma MP500 Multifunction Machine

- 1 picolitre FINE print-head technology providing up to 9600 x 2400 dpi
- ChromaLife 100 ink for long-lasting photos
- Print & copy up to 29 black & 19 ppm colour
- 2.5" LCD screen to view memory card contents
- Direct digital camera & photo card printing
- Borderless photo printing up to A4
- Scan resolution 1200 x 2400 dpi
- Dual paper path, auto duplex & CD/DVD printing



Our Price **\$308** Save **\$41**
WebCode.....CAN0468

Canon Pixma MP830 Multifunction Machine

- Full colour printer, copier, scanner & fax
- 1 picolitre FINE print-head technology, providing up to 9600 x 2400 dpi printing
- Dual paper path with Auto Sheet Feeder and cassette
- Direct CD/DVD printing
- Mobile phone printing
- Built-in automatic duplex
- Digital camera printing
- 5 individual ink tanks
- Auto Duplex Scan



Our Price **\$478** Save **\$71**
WebCode.....CAN0497

Canon Pixma MF5750 Multifunction Machine

- Networkable high resolution laser printer, fax, scanner, and digital copier all-in-one
- Laser copy quality (20 cpm, 600 x 600 dpi)
- Electronic collating and 2-on-1 copy to fit two originals on one page
- 50-page auto document feeder
- Huge fax memory
- Optional network printing
- 64MB SDRAM
- CCD scanning



Our Price **\$528** Save **\$71**
WebCode.....CAN0445

Visit www.csw.com.au to view the complete range of Canon Printers!

Verbatim CD-R Optical Media

WebCode	Product Description	Price	SAVE
VBM1856	Verbatim CD-R 52x 700MB/80Min Slim Pack 10	\$7	\$1
VBM1857	Verbatim CD-R 52x 700MB/80Min Slim Coloured Pack 25	\$18	\$2
VBM4961	Verbatim CD-R 52x 700MB/80Min Spindle 50	\$18	\$5
VBM0452	Verbatim CD-R 52x 700MB/80Min Spindle 50 White Inkjet	\$22	\$8
VBM5005	Verbatim CD-R 52x 700MB/80Min Spindle 50 Silver Inkjet	\$18	\$7
VBM4554	Verbatim CD-R 52x 700MB/80Min Spindle 100	\$36	\$9
VBM3133	Verbatim CD-RW 2x-4x 700MB/80Min Slim Pack 5	\$5	\$2

Verbatim DVD Optical Media

WebCode	Product Description	Price	SAVE
VBM9510	Verbatim DVD-R 16x 4.7GB Spindle 10	\$8	\$4
VBM5048	Verbatim DVD-R 8x 4.7GB Spindle 25	\$17	\$9
VBM4455	Verbatim DVD-R 8x 4.7GB Spindle 50 White Inkjet	\$36	\$16
VBM4852	Verbatim DVD-R 8x 4.7GB Spindle 50 Bulk Silver	\$36	\$16
VBM5164	Verbatim DVD-R Dual Layer 8.5GB	\$7	\$4
VBM4501	Verbatim DVD-RW 2x 4.7GB Jewel Case	\$2	\$1
VBM4912	Verbatim DVD+R Dual Layer 8.5GB	\$5	\$4
VBM5128	Verbatim DVD+R 8x 4.7GB Lightscribe Slim Pack 20	\$25	\$8
VBM4851	Verbatim DVD+R 8x 4.7GB Spindle 10	\$7	\$4
VBM5033	Verbatim DVD+R 16x 4.7GB Spindle 25	\$18	\$5
VBM4980	Verbatim DVD+R 8x 4.7GB Spindle 50 Inkjet Printable	\$35	\$9
VBM4981	Verbatim DVD+R Dual Layer 8.5GB 20 Pack Inkjet Printable	\$99	\$30
VBM4520	Verbatim DVD+RW 4x 4.7GB	\$2	\$1
VBM5014	Verbatim DVD+R Double Layer 3-pack in Jewel Case	\$15	\$4

Now you can push the performance limits of CD writing - it's easy with 52x CD-R media from Verbatim. Tested and certified by leading 52x drive manufacturers.



Recognized as the choice for professional users, DataLifePlus DVD-R discs are based on an advanced "Metal Azo" recording dye, which provides the highest level of performance, reliability, and archival life.

Visit www.csw.com.au to view the complete range of Verbatim media!

HP DeskJet Cartridges

WebCode	Product Description	Price	SAVE
HPD2061	HP Ink Cartridge N° 27/28 Combo	\$50	\$3
HPI2017	HP Ink Cartridge N° 56/57 Combo	\$67	\$9
HPD2025	HP Ink Cartridge N° 56 Black for DJ 5550 – C6656AA	\$49	\$2
HPD4844	HP Ink Cartridge N° 10 Black for DJ 2000C/2500C – C4844AA	\$48	\$13
HPD5002	HP Ink Cartridge No 14 Black – C5011DA	\$37	\$8
HPD6545	HP Ink Cartridge No 15 Black for DJ 810/812/840/845 – C6615DA	\$42	\$9
HPD8772	HP Ink Cartridge N° 27 Black for DJ 3420 – C8727AA	\$27	\$6
HPI8782	HP Ink Cartridge N° 28 Colour for DJ 3420 – C8728AA	\$32	\$2
HPD095	HP Ink Cartridge No 45 Black for DJ 710C/720C/890C/870CXI – 51645AA	\$44	\$8
HPD6656	HP Ink Cartridge N° 56 Black for DJ 5550 – C6656AA	\$30	\$5
HPI6657	HP Ink Cartridge N° 57 Colour for DJ 5550C – C6657AA	\$49	\$9
HPD6658	HP Ink Cartridge No 58 Photo Colour for DJ 5550 – C6658AA	\$36	\$7
HPD6578	HP Ink Cartridge N° 78 Colour for DJ 900/1220C – C6578DA	\$49	\$9
HPD8767	HP Ink Cartridge No 96 Black	\$45	\$8
HPD9363	HP Ink Cartridge Tri Color No 97	\$50	\$10

HP Mono & Colour LaserJet Toner Cartridges

WebCode	Product Description	Price	SAVE
HPL2612	HP Toner Cartridge for LaserJet 1010/1015 – Q2612A	\$101	\$24
HPL7117	HP Toner Cartridge for LaserJet 1200 Series 3,500 Pages – C7115X	\$110	\$24
HPL2614	HP Toner Cartridge for LaserJet 1300 Series 4,000 Pages – Q2613X	\$128	\$27
HPL4096	HP Toner Cartridge for LaserJet 2100/2200 Series 5,000 Page – C4096A	\$144	\$32
HPL2610	HP Toner Cartridge for LaserJet 2300 Series – Q2610A	\$172	\$29
HPL1338	HP Toner Cartridge for LaserJet 4200 Series 12,000 Pages – Q1338A	\$220	\$27
HPL1339	HP Toner Cartridge for LaserJet 4300 Series – Q1339A	\$292	\$49
HPL5949	HP Toner Cartridge for LaserJet 1160/1320 – Q5949A	\$103	\$22
HPL3960	HP Toner Cartridge for Colour LaserJet 2550 Black – Q3960A	\$119	\$9
HPL3978	HP Toner Cartridge for Colour LaserJet 2550 Cyan – Q3961A	\$143	\$24
HPL3981	HP Toner Cartridge for Colour LaserJet 2550 Magenta – Q3963A	\$143	\$24
HPL3979	HP Toner Cartridge for Colour LaserJet 2550 Yellow – Q3962A	\$143	\$24

Canon Ink Cartridges

WebCode	Product Description	Price	SAVE
BC13EBK	Canon Ink Cartridge Black – BC13EBK	\$19	\$3
BC13EC	Canon Ink Cartridge Cyan – BC13EC	\$16	\$3
BC13EM	Canon Ink Cartridge Magenta – BC13EM	\$16	\$3
BC13EY	Canon Ink Cartridge Yellow – BC13EY	\$16	\$3
CAN0010	Canon Ink Cartridge Black – BC121BK	\$13	\$3
CAN0011	Canon Ink Cartridge Colour – BC121C	\$32	\$5
CAN0066	Canon Ink Cartridge Black – BC124BK	\$12	\$4
CAN0155	Canon Ink Cartridge Black Twin – BC124	\$22	\$3
CAN0164	Canon Ink Cartridge Colour Twin – BC124	\$44	\$5
CAN0065	Canon Ink Cartridge Colour – BC124C	\$25	\$5
CAN0048	Canon Ink Cartridge Black – BC16BK	\$22	\$3
CAN0050	Canon Ink Cartridge Cyan – BC16C	\$22	\$3
CAN0051	Canon Ink Cartridge Magenta – BC16M	\$22	\$3
CAN0053	Canon Ink Cartridge Yellow – BC16Y	\$22	\$3
CAN0049	Canon Ink Cartridge Photo Cyan – BC16PC	\$22	\$3
CAN0052	Canon Ink Cartridge Photo Mag – BC16PM	\$22	\$3
CAN0210	Canon Ink Cartridge Colour – BC115C	\$38	\$7
CAN0011	Canon Ink Cartridge Colour – BC121C	\$30	\$5

Epson Ink Cartridges

WebCode	Product Description	Price	SAVE
EPA6190	Epson Ink Cartridge for Stylus C63/C83 Black – T0461	\$17	\$2
EPA7290	Epson Ink Cartridge for Stylus C63/C83 Cyan – T047290	\$12	\$1
EPA7390	Epson Ink Cartridge for Stylus C63/C83 Magenta – T047390	\$12	\$1
EPA7490	Epson Ink Cartridge for Stylus C63/C83 Yellow – T047490	\$12	\$1
EPA7011	Epson Ink Cartridge for Stylus C70/C80/C82 Black – T032190	\$39	\$9
EPA7022	Epson Ink Cartridge for Stylus C70/C80 Cyan – T032290	\$18	\$2
EPA7033	Epson Ink Cartridge for Stylus C70/C80 Magenta – T032390	\$18	\$2
EPA7044	Epson Ink Cartridge for Stylus C70/C80 Yellow – T032490	\$18	\$2
EPA0890	Epson Ink Cartridge for R210/R310/RX510 Black – T0491	\$17	\$2
EPA0511	Epson Ink Cartridge for R210/R310/RX510 Cyan – T0492	\$17	\$2
EPA0514	Epson Ink Cartridge for R210/R310/RX510 Light Cyan – T0495	\$17	\$2
EPA0515	Epson Ink Cartridge for R210/R310/RX510 Light Magenta – T0496	\$17	\$2
EPA0512	Epson Ink Cartridge for R210/R310/RX510 Magenta – T0493	\$17	\$2
EPA0513	Epson Ink Cartridge for R210/R310/RX510 Yellow – T0494	\$17	\$2
EPA0810	Epson Ink Cartridge for Stylus 810/830U/925/935 Black – T026	\$31	\$7
EPA0811	Epson Ink Cartridge for Stylus 810/830U/925/935 Colour – T027	\$25	\$4

V3 Bluetooth Headset

V3 Bluetooth OLED headset BTH-8 is innovation at your fingertips. Pack with some of the familiar functions that you normally get from your mobile phone. Get quick access to caller ID, enjoy easy redial in a flash and best of all, you could browse your phone book and make calls directly from V3 BTH-8. Possibly the most Technologically Advanced Bluetooth in around.



Our Price **\$115** Save **\$14**
WebCodeVTH0001

Roku SoundBridge Network Media Player

Finally, a network music player that looks as good as it sounds! The Roku SoundBridge plays your PC or Mac music files anywhere in the house, connecting your stereo or powered speakers to your digital music library. Even listen to Internet Radio stations, without turning on your computer.



Our Price **\$369** Save **\$30**
WebCodeROK0001

Samsung 1GB MP3 Player

Unique Clip and necklace design, stylish oval shape with 3 line white on black display and hidden keys. Features include:

- MP3, WMA with DRM, OGG, ASF, WAV, Playlist
- Li-Polymer battery with up to 10 hours playback
- FM Radio and Recorder
- USB 2.0 PC Connectivity
- SRS WOW Sound

Our Price **\$199** Save **\$30**
WebCodeSAM0038

Consumables

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 5 Year Warranty

Nokia 7360 Mobile Phone

Eclectic, audacious and confident. With its fascinating interplay of leather-inspired materials, elegantly etched metal and transparent surfaces, the Nokia 7360 phone was designed to be noticed. Effortlessly stylish, this tri-band phone with integrated VGA camera and video recorder will complement your own sense of style with unexpected beauty and simple confidence.



Our Price \$364 **Save \$74**
WebCode.....NMH7361

Nokia 7370 Mobile Phone

Thrill with the graceful swivel motion with the refined, yet spontaneous Nokia 7370. Let its free spirit transport you to a fascinating new world where stylish simplicity rules. Behold the leather-inspired accents, the elegantly etched metal surfaces and the innovative swivel design. Undeniably appealing, let the Nokia 7370 awaken your deepest desires.



Our Price \$526 **Save \$103**
WebCode.....NMH7370

Nokia 7380 Mobile Phone

Complementing your unique style, the Nokia 7380 phone is perfect for a night in town. Feel the sensual fusion of leather-inspired materials complemented with etched metal and quicksilver surfaces. Touch the core of elegant inspiration as you intuitively glide through its many facets. Be the toast of the fashion elite as you flaunt its entrancing light-enhanced UI effects; with the Nokia 7380 phone you will never fail to leave an unforgettable impression.



Our Price \$758 **Save \$141**
WebCode.....NMH7380

Iomega Rev USB Drive

Revolutionary Removable Hard Disk Storage

Read and write to the Iomega REV™ 35GB/90GB disks, which are pocket-sized, cartridges that hold 35GB of data (or up to 90GB of backup data with the included software compression).

- Reliable unattended data protection and seamless recovery
- Predefined and custom backup schedules
- Quick-start backup and restore wizards
- Includes full system backup and restore for disaster recovery

Atapi (IOM2963) **\$532**
Firewire (IOM3063) **\$557**
SCSI (IOM3078) **\$699**



Our Price \$557 **Save \$142**
WebCode.....IOM2955

Iomega Rev Disks

The Iomega® REV™ 35GB/90GB storage media comes in a single pack. Offering 35GB of native storage capacity and 90GB of compressed storage capacity. This long-life media offers virtually unlimited rewriteability.

4 Pack (IOM3057) **\$276**



Our Price \$86 **Save \$13**
WebCode.....IOM3029

Iomega StorCenter 320GB Network Attached Storage

Consolidate and protect data across multiple platforms with this cost-effective alternative to general-purpose servers. Iomega NAS 200d protects your business information in an easily accessible and antivirus-hardened storage vault recovers data from accidents, operator errors or viral attacks. It also Improves office productivity with faster and more efficient information and file sharing ergonomic form factor and extremely quiet operation fits easily into any office. Installs in just 15 minutes with plug-and-play network connectivity and intuitive installation tools

- EASE OF USE Cold swap Serial-ATA hard drives for on-site service
- EFFICIENT Microsoft Windows Storage Server 2003 is a storage system you already know how to use
- COMPATIBLE Works with Windows, Macintosh, NetWare, UNIX and Linux environments
- VERSATILE Optional functionality available, such as an integrated Print Server management or Iomega REV Technology for unattended automatic backups and archiving



480GB (IOM3041) **\$2937**

Our Price \$1991 **Save \$608**
WebCode.....IOM3040

Iomega Silver Service Plan

Iomega Silver Service Plan The Iomega Silver Service Plan for Zip® Drives, External Hard Drives, REV, CDRW & DVD's enhances protection for your technology. The Silver Service Plan extends your original warranty to 3 years and offers Next Business Day Advanced Exchange Replacement as well as free phone support for the duration of your warranty. You Get:

- 1 year standard warranty
- 2 years extended warranty
- Free 24x7 email with 4 hour average response time
- Express advance exchange
- Web-based support
- Software patches & Upgrades
- Getting started support

Our Price \$93 **Save \$6**
WebCode.....IOM3325

SanDisk Ultra II

Action Photography. Professional Results.

The SanDisk Ultra II cards are unbeatable and best-in-class:

- Write speed (minimum) = 9MB/sec / Read speed (minimum) = 10MB/sec
- Features high density flash memory and optimized controller technology lets you save large image files faster
- Lifetime Warranty

Ultra II CF Card 1GB (SIM1002) **\$99**
Ultra II SD Card 1GB (SIM5987) **\$99**



Ultra II CF Card 2GB
Our Price \$177 **Save \$43**
WebCode.....SIM0691

Ultra II SD Card 2GB
Our Price \$155 **Save \$24**
WebCode.....SIM0457

SanDisk Cruiser Micro

SanDisk Cruiser Micro new design is a small USB Flash Drive (UFD).

Advanced Features:

- Small, compact light weight design
- New Retractable USB slider eliminates the need for caps
- Hi-Speed USB 2.0 certified (backwards compatible with all USB 1.1 ports)
- Compatible with Windows 2000, SP4 and XP

1GB (SIM0436) **\$89**
2GB (SIM0434) **\$152**



512MB
Our Price \$52 **Save \$27**
WebCode.....SIM0688

SanDisk Titanium

The New look Cruiser Titanium is fast, strong and unbeatable:

- Strong Liquidmetal® casing crush resistant over 2,000lbs
- Excellent durability and scratch resistance
- Retractable USB slider eliminates the need for caps
- Lightning speed up to 15MB/sec write and read performance

2GB (SIM0150) **\$179**



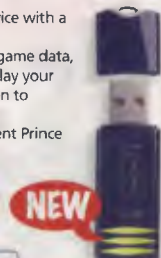
1GB
Our Price \$106 **Save \$17**
WebCode.....SIM0151

SanDisk Cruiser Crossfire

SanDisk Cruiser Crossfire USB Flash Drive is specially designed to make your console or PC gaming experience portable.

- Compatible with any device with a USB port (PC, Xbox 360)
- Allows you to save your game data, view and store images, play your favourite videos and listen to digital music.
- Pre loaded gaming content Prince of Persia or CSI

1GB (SAN0040) **\$94**



512MB
Our Price \$54 **Save \$11**
WebCode.....SAN0039

Sandisk Cruiser Profile 1GB

SanDisk's Cruiser Profile provides the ultimate in data security:

- Fingerprint identification technology
- Added personal security capability to safeguard data and IE passwords
- Write speed (minimum) = 5MB/second / Read speed (minimum) = 8MB/second

512MB (SAN0024) **\$68**



Our Price \$119 **Save \$36**
WebCode.....SAN0026

See page 2 for details!
smart BUY club
3% rebate
Did you know that you can get up to 3% rebate on every order?
www.csw.com.au/smartbuy

Harmony 880 Remote Control

Optimised for complicated HDTV and PVR systems, the Harmony 880 helps you tame tough configurations like switching your television between video aspect ratios depending on the program source. The interactive color display lets you quickly choose a 16:9 ratio for movies and HDTV, or a standard 4:3 ratio for basic television programming.

Colour display

Why settle for another boring remote? The Harmony 880's color LCD is both functional and stylish, with user-customizable backgrounds, button icons and text.

- Ample space for up to eight custom activities or controls
- On-screen battery level indicator shows you charge status

Recharging station

Never replace batteries again. The Harmony 880 includes a sleek docking station that keeps the remote fully charged. Your family will always know where to put the remote — and you'll always know where to find it!

- Lithium-ion battery provides up to a one-week charge under normal use
- The horizontal docking station allows remote to be used while charging



Our Price **\$276** Save **\$124**
WebCode LOG3499

Logitech Wireless Music System

Take your digital music out of your PC and into your house with Logitech's Wireless Music System for PC. Listen to uncompromising digital audio quality no matter what you listen to — including music downloads, subscription services, and Internet radio.

It works with your existing PC media player, and it connects to any type of speaker system, whether it's your home system or powered multimedia speakers.

The wireless remote control allows you to start, pause, skip, rewind, and control volume as it plays from your PC. All in one box; all in one system; all without wires.



Our Price **\$174** Save **\$76**
WebCode LOG3531

Logitech S510 Desktop Keyboard and Mouse

The Cordless Desktop S 510 is a perfect match with today's flat screen systems. Its innovative flatter keyboard design creates a consistent desktop look, and amazing comfort. Built-in palm rest provides better rest for users' wrists. Integrated one-touch media and Internet navigation controls include a "Shuffle" key for a random music mixes.

Enjoy one-touch image zooming, and even handy rotation, of digital pictures. Programmable F-keys launch applications. An advanced optical mouse delivers fast, consistent performance — and more freedom of movement. Tilt wheel enables vertical or horizontal scrolling of pages. Longer battery life can mean 6 months or more of continuous use.



Our Price **\$105** Save **\$34**
WebCode LOG3514

Logitech Quickcam STX

Make live video calls and share photos seamlessly with QuickCam Communicate STX and your Video IM software. High performance VGA optics and an integrated microphone provide ultra sharp video and crisp audio. Communicate STX even allows you to video call in full screen and its vivid blue light tells you when you're "live".



Our Price **\$72** Save **\$27**
WebCode LOG3492

Logitech QuickCam Fusion

Next-generation image sensor technology for great performance even in low light conditions, the sleek shape provides a lower lens position for more personal, eye-to-eye contact, built-in microphone ensures that your audience can hear, as well as they see you. RightSound makes headset-free conversations a reality by canceling unwanted echoes that can occur during video calls.



Our Price **\$140** Save **\$40**
WebCode LOG3536

Logitech Z4 2.1 System Speakers

Premium sound and modern design for music lovers. Sleek satellite design combines one active and two pressure drivers for a rich, full audio experience. Pressure driver subwoofer technology delivers unparalleled distortion-free bass. Auxiliary input for MP3 players, CD players or other portable audio devices, high-gloss finish and cast metal stands complement any desktop.



Our Price **\$128** Save **\$42**
WebCode LOG3520

Logitech 350 Headset

USB technology enhances audio quality and functionality. Features in-line volume controls, noise cancelling, plush ear pads and premium headband for superior comfort.



Our Price **\$57** Save **\$33**
WebCode LOG3486

Logitech V400 Mouse

The Logitech V400 Laser Cordless Mouse for Notebooks offers boundless mobility with an All-Terrain Laser sensor that tracks on even more surfaces. 2.4GHz Digital Cordless gives you a 5X stronger cordless connection, with no interference. Tilt Wheel Plus Zoom and programmable forward/backward buttons provide unprecedented control. A shock-resistant design and rubber side grips make the V400 ready for the road. USB. 3-year warranty.

Grey (LOG3538) \$61



Our Price **\$61** Save **\$29**
WebCode LOG3554

Logitech Mobile Freesom BT Headset

Tired of holding your mobile phone to your ear? Enjoy cordless hands-free convenience with the comfortable and lightweight Logitech Mobile Freedom Headset. With features like eight hours of talk time and the WindStop microphone, this Bluetooth headset has the performance you need to stay in touch anywhere you go.



Our Price **\$62** Save **\$27**
WebCode LOG3534

Logitech G15 Gaming Keyboard

Stay in the game with the Logitech G15 keyboard. Use the tilt-able, backlit LCD display to keep tabs on messages, game status and many other types of information. Eighteen programmable macro keys let you set up to 54 custom macros per game, and every keycap features blue backlit characters for late-night gaming sessions. USB only. Windows XP.



Our Price **\$103** Save **\$37**
WebCode LOG3552

G7 Cordless Laser Mouse

With 2.4 GHz cordless technology, the Logitech G7 Laser Cordless Mouse delivers full-speed USB cordless performance, while the 2000 dpi laser-sensor tracks 6.4 megapixels every second to deliver best-in-class tracking on most surfaces. Each rechargeable Li-Ion battery pack provides 10 hours of game play.



Our Price **\$128** Save **\$52**
WebCode LOG3524

Logitech 3D Pro Extreme Joystick

Take complete control with the Logitech Extreme 3D Pro joystick. Its 12 fully programmable buttons give you an incredible amount of flexibility and performance. The precise twist handle includes an 8-way rubber hat switch. Throttle controls rotate smoothly for extraordinary control. And the stable, extra heavy weighted base keeps you firmly grounded. Of course, the sleek new design looks hot, too.



Our Price **\$41** Save **\$8**
WebCode LOG3392

Comsol USB Cables

- Comsol 2 mtr USB 2.0 Peripheral cable type A male-B male - 480Mbps (COM8930) **\$11**
- Comsol 3 mtr USB 2.0 Peripheral cable type A male-B male - 480Mbps (COM8935) **\$14**
- Comsol 5 mtr USB 2.0 Peripheral cable type A male-B male - 480Mbps (COM8940) **\$19**



Comsol FireWire Cables

- Comsol 2mtr IEEE1394 FireWire Cable - 4 pin to 4 pin (COM6105) **\$17**
- Comsol 4.5mtr IEEE1394 FireWire Cable - 4 pin to 4 pin (COM6110) **\$24**
- Comsol 2mtr IEEE1394 FireWire Cable - 6 pin to 4 pin (COM6120) **\$16**
- Comsol 4.5mtr IEEE1394 FireWire Cable - 6 pin to 4 pin (COM6125) **\$23**
- Comsol 2mtr IEEE1394 FireWire Cable - 6 pin to 6 pin (COM6130) **\$18**
- Comsol 4.5mtr IEEE1394 FireWire Cable - 6 pin to 6 pin (COM6135) **\$25**



Comsol Ethernet Patch Cables

- Comsol 1 mtr RJ45 Cat 6 Enhanced Patch Cable Blue (COM9045) **\$10**
- Comsol 3mtr RJ45 Cat 6 Enhanced Patch Cable Blue (COM0112) **\$15**
- Comsol 5mtr RJ45 Cat 6 Enhanced Patch Cable Blue (COM9090) **\$22**
- Comsol 10mtr RJ45 Cat 6 Enhanced Patch Cable Blue (COM9105) **\$27**



WIN THE Microsoft XBOX 360 Digital Home Entertainment Package

See Pg 39 for details

Microsoft Notebook Optical Mouse 3000

- 4 Way Tilt Wheel Offers 4 way scrolling
- 4 Customisable Buttons (Left, Right, Wheel, Magnifier)
- High Definition Performance with 1000 DPI
- Rubber Side Grips, Comfortable Shape and Finger Groove
- USB Only

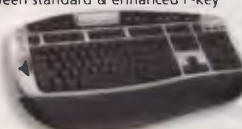


Our Price **\$38** Save **\$12**

WebCode.....MST8409

Microsoft Digital Media Professional Keyboard

- The zoom slider makes it easy to take a close look at pictures, maps, documents & Web pages without taking hands off the keyboard
- Enjoy easy access to favourite music, video clips & media programs with the press of a key
- Five easy to set customisable "Favorites" keys
- Perform common tasks, with the touch of a key
- Toggle between standard & enhanced F-key commands



Our Price **\$45** Save **\$15**

WebCode.....MST8344

Microsoft Natural Ergonomic 4000 Keyboard

- Ergonomic "split design"
- Inbuilt Scroll wheel
- New key layout improved for Ergonomic enthusiasts
- New 14 degree gable and proprietary "gull wing" design
- New cushioned wrist rests
- Wired USB



Our Price **\$62** Save **\$18**

WebCode.....MST8406

Microsoft Wireless Notebook Laser Mouse

- High Definition Laser Performance
- 1AA battery and 6 Months of Battery Life
- High End Color and Finishes
- Wireless Mouse with 1m range
- Snap-In Receiver automatically turns off mouse
- USB



Our Price **\$96** Save **\$33**

WebCode.....MST8410

Microsoft Wireless Optical Desktop with Fingerprint Reader

- Fingerprint Reader for convenient password replacement
- Optical mouse with Tilt Wheel Technology
- Longer mouse battery life
- Multimedia Centre. Control your media activities with the touch of a button



Our Price **\$115** Save **\$35**

WebCode.....MST8351

Microsoft Wireless Optical Desktop 5000

The all-in-one photo editing solution that makes it easy to manage, edit, and share photos. Includes wireless mouse and digital image standard 2006 software. Keyboard integrated PhotoCenter, one-touch hot keys, high Definition optical mouse and zoom slider. Say good-bye to tangled cords and clutter.



Our Price **\$132** Save **\$48**

WebCode.....MST8401

New Magic DIGITAL VISION-HD

Digital, High-Definition Media Centre for Windows XP

DIGITALVISION-HD is the all-in-one media centre for your Windows PC. Superior picture quality, rock-solid two year warranty and Australian-tested performance. It's all you need to turn your PC into a flexible entertainment powerhouse! DIGITALVISION-HD is easy to use and easy to install, you'll be watching and recording digital TV in minutes! It runs on a standard PC and utilises your existing CD/DVD drive, graphic and audio capabilities to watch, pause and record live TV, watch DVD's, view digital pictures, listen to CDs, radio and audio files, view TV listings and set recordings via the 30Day trial subscription Australian Electronic Program Guide.



HD PCI Our Price **\$249** Save **\$50**

WebCode.....NEW5001

HD USB2 Our Price **\$275** Save **\$24**

WebCode.....NEW5000

Hauppauge TV Express

Watch live TV or Schedule your recordings, Snap and print stills from whatever you're watching. Or record video clips from your camcorder or off the air to create your own high-impact presentations. The digitised TV image is sent directly into the memory of your PC's VGA card without creating overhead for the CPU. So you can work on applications while simultaneously watching TV in a resizable window.

- New! Now with SoftPVR for DivX and MPEG recording on you PC!
- Teletext compatible
- 2 Year Warranty

FM Radio Model (HAU0008) **\$177**
USB Model (HAU0004) **\$209**



Our Price **\$98** Save **\$11**

WebCode.....HAU0017

Hauppauge PVR150

- Watch, Pause, Record TV on your PC, in a window or full screen!
- Digital VCR, too! Record your TV shows and home movies to disk using hardware MPEG-2 compression!
- High quality MPEG-2 hardware encoder used when recording, so your PC continues to run at full speed while recording videos to disk.
- Turn your TV show and home videos into DVD or CD. Includes Ulead's DVD MovieFactory for disk burning!
- Includes MPEG editor, TV scheduler and IR remote control!
- 2 Year Warranty.

WinTV-PVR-350 PCI DBX Stereo (HPG0002) **\$399**

WinTV-USB2 USB Mono (HAU0004) **\$253**

PVR-USB2 USB Stereo (HAU0013) **\$316**



Our Price **\$216** Save **\$23**

WebCode.....HAU0001

See page 2 for details!

3% rebate

Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy

Avid Liquid 7

Audio. DVD. Effects. One Application. Liquid's powerful SD and HD video editor offers integrated DVD authoring, surround sound audio processing and 1000s of powerful real-time effects. Liquid's integrated toolset provides all of the tools needed to create the highest quality productions and finish to tape, DVD or web streams.



Our Price \$935 Save \$64

WebCode PIN0131

Dvico Fusion USB Digital TV Tuner

- Supports S/PDIF sound card output for home theatre users
- Decode and view Digital Terrestrial Television
- USB 2.0 high speed compatible
- Real Time Digital Video Recording (DVR)
- Scheduled recording
- BDA drivers for 3rd party software
- Recording stream cut-on-the-fly utility
- Hi-res still image capture
- HD (MPEG2) to DVD/MPEG4 (Divx) conversion
- Convertible Aspect Ratio (16:9 or 4:3)
- USB remote control included
- Time-Shifting

Receive a FREE exclusively designed World Cup Soccer Ball with every purchase*

*Offer via redemption from Dvico. Conditions apply. See www.csw.com.au/promotions



Our Price \$179 Save \$146

WebCode DVC00013

Synology Disk Station 101J

The Synology DS-101j is a 6-in-1 server designed for SOHO and home users with powerful features at a super cost effective price point. The DS-101j can easily integrate the following features:

File Sharing – You can store and share files with anyone throughout the local network.

Automatic Backup – Back up files automatically. Real time or automatically file backup function.

Web Station – Share or advertise your personal or business web pages to people all over the world.

Printer Sharing – Just connect the printer to DS-101j, and start sharing the printer.

FTP Access – Access files anytime, anywhere by connecting to the Internet.

Photo Station – Share your photos & videos with families and friends.

USB Support – Connect up to three USB hard disks.

SATA Gigabit Version (SYN1000) \$519



Our Price \$349 Save \$50
WebCode SYN1001

Dvico TViX Mini

- Watch most movie file formats including – MPEG-1, MPEG-2 (AVI, VOB) and MPEG-4 (AVI, DivX, XviD)
- Listen to MP3's through hi-fi sets or car audio systems
- View Digital Photo's on your TV
- Use as a USB HDD to store files
- Adapted USB2.0 OTG (On-The-Go) technology.
- Sleek aluminium case fits into your shirt pocket!



Our Price \$255 Save \$45
WebCode DVC00017

Watch the Soccer on Your PC at Work

Dvico Fusion HDTV Dual Digital TV Tuner

Watch One Channel While Recording Another. Watch DVB-T Digital TV on Your PC Picture in Picture & Multi-view Function Record TV programs to hard drive as DVD/MPEG2 format Scheduled recording from Hibernation/Stand-by/PC-off mode Pause and replay live TV shows Analog video capture and recording in digital Hi-res still image capture Compatible with Windows XP Media Center Edition 2005 Supports HD-to-DVD or Divx format conversion Full function infrared remote control.

Receive a FREE exclusively designed World Cup Soccer Ball with every purchase*

*Offer via redemption from Dvico. Conditions apply see www.csw.com.au/promotions



Our Price \$285 Save \$40

WebCode DVC0016

Dvico Fusion Plus Digital TV Tuner

- Real Time Digital Video Recording(DVR)
- High Resolution Still Image Capture
- Analog Video & Audio capture
- Scheduled recording
- Time-Shifting

Receive a FREE exclusively designed World Cup Soccer Ball with every purchase*

*Offer via redemption from Dvico. Conditions apply see www.csw.com.au/promotions

Our Price \$176 Save \$73

WebCode DVC00005

Pinnacle 310i TV Tuner

Pinnacle PCTV MediaCenter 310i supports both analogue and DVB-T reception. Combine a high quality TV viewing experience with advanced personal video recording features such as Timeshifting, remote-controlled Electronic Program Guide, one-touch or programmable TV and radio recording. Includes Pinnacle MediaManager to help you find, view, and organise potentially thousands of music files, digital photos and videos collected on your hard drive.



Our Price \$168 Save \$32

WebCode PIN0129

Pinnacle 60e TV Tuner

Turn your PC into a TV and Personal Video Recorder combine a high-quality TV viewing experience with advanced personal video recording features. Timeshifting technology controls live TV, fast-forward past commercials or instantly replay a scene. Record radio directly to your hard disk, use timeshifting to pause what you are listening to and pick up where you left off or fast forward past commercials or songs you don't like. Ideal for watching and recording TV on your PC and supports stereo/multi channel TV sound. Includes remote control.



Our Price \$161 Save \$29

WebCode PIN0130

Pinnacle Studio 500 PCI

Introducing Studio 500-PCI version 10, the most friendly, complete and powerful home video editing solution available today. Studio 500-PCI provides the ease and power to quickly combine and enhance your precious memories from digital and analog camcorders and effortlessly preserve and share them on DVD, the Web and beyond.



Our Price \$209 Save \$36

WebCode PIN0118

Pinnacle Studio 500 USB

Introducing Studio 500-USB version 10, the most friendly, complete and powerful home video editing solution available today. Provides the ease and power to quickly combine and enhance your precious memories from digital, analog camcorders and VCR's on your PC or laptop and effortlessly preserve and share them on DVD, the Web and beyond.



Our Price \$275 Save \$45

WebCode PIN0117

Pinnacle Studio 700 PCI

Introducing Studio 700-PCI version 10, the most friendly, complete and powerful home video editing solution available today. Provides the ease and power to quickly combine, enhance, and instantly preview on TV, your videos from digital and analog camcorders and effortlessly preserve and share them on DVD, the Web and beyond.



Our Price \$385 Save \$54

WebCode PIN0120

Pinnacle Studio 700 USB

Introducing Studio 700-USB version 10, the most friendly, complete and powerful home video editing solution available today. Provides the ease and power to quickly combine, enhance, and instantly preview on TV, your videos from digital and analog camcorders on your PC or laptop and effortlessly preserve and share them on DVD, the Web and beyond.



Our Price \$429 Save \$60

WebCode PIN0119

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 5 Year Warranty

Maxtor SATA Hard Drives

- Designed for mainstream PC, consumer electronics and emerging markets
 - 80, 120, 250 & 300GB capacities
 - 7200 RPM
 - SATA interfaces
 - 2MB or 8MB cache buffer
 - Fluid dynamic bearing motors for quiet operation
- 120GB (MAX0066) **\$121**
250GB (MAX0056) **\$209**
300GB (MAX0061) **\$275**



80GB
Our Price **\$99** Save **\$30**
WebCode.....MAX0054

Maxtor Hard Drives ATA-133 7200RPM 8MB Cache

The solution for performance PCs with data intensive applications such as network attached storage, home networking devices, audio, video and other multimedia applications.

120GB (MAX0052) **\$112**
160GB (MAX0053) **\$130**



80GB
Our Price **\$90** Save **\$19**
WebCode.....MAX0051

Maxtor 300GB IDE Hard Drive

Capacities up to 300GB, dual processor technology and larger buffers for faster boot times, file transfers and performance that handles multiple applications with ease. These high performance 7200RPM drives are designed for multimedia PC users, system integrators and white-box builders.



Our Price **\$189** Save **\$40**
WebCode.....MXT0126

Visit www.csw.com.au/maxtor to view our full range of Maxtor Drives!

Maxtor OneTouch Mini Portable External HDD

- Ideal storage and backup solution for people on the go
- USB 2.0 and 1.1
- Maxtor OneTouch button - the easy way to make backup copies of your files
- Quick and easy installation
- Plug and play storage



2.5 Portable Solution

60 GB
Our Price **\$176** Save **\$23**
WebCode.....MAX0083

100 GB
Our Price **\$276** Save **\$23**
WebCode.....MAX0084

Maxtor OneTouch III

- Simple Maxtor user-interface for drive management, security and backup scheduling
- System Rollback - rolls your system state back to a better point in time while keeping data current
- Sync automatic synchronization of data
- Maxtor OneTouch button - the easy way to make backup copies of your files
- Plug and play storage
- Quick and easy installation



1+ GB
Our Price **\$212** Save **\$17**
WebCode.....MXT0207

200 GB
Our Price **\$285** Save **\$14**
WebCode.....MXT0200

3+ GB
Our Price **\$376** Save **\$23**
WebCode.....MXT0201

5+ GB
Our Price **\$579** Save **\$20**
WebCode.....MAX0082

Maxtor OneTouch III Turbo

- User-configurable RAID 0 and RAID 1
- FireWire 800 FireWire 400 USB 2.0 and 1.1
- PC and Mac compatible
- Maxtor OneTouch button - backup
- Maxtor DriveLock protects contents of drive if lost or stolen
- Cool operation and modular design for easy stacking
- Plug and play storage
- Creates historical backup versions with comprehensive system and data restore to a point in time



Our Price **\$754** Save **\$45**
WebCode.....MXT0250

1TB
Our Price **\$1130** Save **\$69**
WebCode.....MXT0251

Maxtor Shared Storage Plus

- Designed for SOHO and home users
- 2 USB ports for sharing printers extra storage
- Shared folder configurable permissions
- Drag and Sort for easy file organization
- Windows 2000, XP and MAC OSX
- 10/100 Ethernet RJ-45 port connection
- Backup and media streaming



2+ GB
Our Price **\$379** Save **\$20**
WebCode.....MAX0070

3+ GB
Our Price **\$474** Save **\$24**
WebCode.....MAX0071

500 GB
Our Price **\$668** Save **\$30**
WebCode.....MXT0104

Maxtor Ultra Series Hard Drive Kits

- Ideal for high-end gaming and digital video
- 7200 RPM ATA/IDE hard drive
- Ultra fast 8MB cache buffer up to 20% faster performance
- Ultra ATA/133 interface up to 33% faster data transfer rates
- Ultra quiet operation with fluid dynamic bearing motor
- Easy installation



80 GB
Our Price **\$119** Save **\$10**
WebCode.....MXT0054

160 GB
Our Price **\$179** Save **\$20**
WebCode.....MXT0056

200 GB
Our Price **\$199** Save **\$30**
WebCode.....MXT0057

See page 2 for details!

smart BUY club 3% rebate

Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy



i-rocks Accessories

MP3 Car DJ FM Transmitter,
Now with track recognition

Black (IRS0026) **\$58**
Silver (IRS0024) **\$58**
White (IRS0025) **\$58**



350K Web camera
With Mic/Earphone

Black / Silver (IRS0038) **\$44**

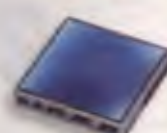


USB Skype/VOIP phone
Save on call costs with VOIP



12 In 1 card reader with 3 port
USB 2.0 Hub

Black (IRS0029) **\$55**
Green (IRS0036) **\$55**
Red (IRS0032) **\$55**



Portable USB 2.0 Card Reader
Supports MMC, MMC4.0, RS
MMC, RS MMC4.0, SD, Mini SD
& T-Flash Cards

Black (IRS0041) **\$16**



Our Price **\$58**
Save **\$10**

WebCode IRS0023

Our Price **\$44**
Save **\$5**

WebCode IRS0039

Our Price **\$50**
Save **\$19**

WebCode IRS0033

Our Price **\$55**
Save **\$18**

WebCode IRS0030

Our Price **\$16**
Save **\$4**

WebCode IRS0040

Videomate PCI digital and analog TV tuner

- Power Up Scheduling Remote Controlled
- Power On/Off
- Low-profile card design
- Analog video/audio capture
- Support HDTV



Our Price **\$138**

Save **\$61**

WebCode ANY0180

Videomate PCI digital TV tuner

- Power Up Scheduling
- Remote Controlled Power On/Off
- Low-profile card design
- Analog video/audio capture
- Support HDTV



Our Price **\$119**

Save **\$40**

WebCode ANY0204

Videomate USB digital TV tuner

Connect to laptop or desktop PC with USB 2.0 connection, Supports SDTV and 1080i HDTV formats in available areas, Supports digital FM radio reception, USB bus powered, no external power required, Supports DVD-quality MPEG-2 recording of digital TV, Timeshifting to instant pause/replay live TV



Our Price **\$119**

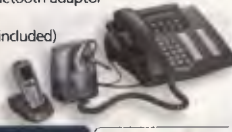
Save **\$40**

WebCode ANY0249

Plantronics bluetooth wireless headset system for mobile & desk phone

Voyager 510SL Bluetooth Headset System combines both Bluetooth Headset and Desktop Adapter - seamlessly switch between your office phone and Bluetooth mobile phone.

- System includes:
- Bluetooth headset + charger
 - Desktop Bluetooth adaptor
 - Handset Lifter
 - (Handsets not included)



Our Price **\$355**

Save **\$34**

WebCode PLA0006

Klipsch ProMedia® GMX A-2.1 speakers

Klipsch "a no-compromise speaker brand that's an absolute must for getting the true power, detail and emotion out of your favorite entertainment experiences." Don't compromise on your PC sound.

- Subwoofer with 75-watt amplifier
- Control pod with two stereo inputs: one dual RCA, one 1/8" minijack, headphone output, power button, and master volume



Our Price **\$229**

Save **\$21**

WebCode KL0001

Pegasus USB Mobile Note Taker

Mobile NoteTaker is the world's first portable handwriting capture device based on natural handwriting as an input. Attach plain paper of any kind and use the Pegasus electronic pen to capture, store and share handwritten drawings, sketches, notes, and memos at meetings, lectures, and conferences.

Pegasus USB PC Note Taker (ANY0200) **\$110**



Our Price **\$245**

Save **\$54**

WebCode PEG0001

FSP 65W Universal Notebook Power Supply

Compatible with 19V input notebooks, up to max current of 3.42A, 65W. 6 DC output tips for maximum compatibility. High efficiency with complete circuit protection. www.fsp-group.com.tw for full compatibility list.

FSP 90w universal notebook power supply (ANY0101) **\$77**

FSP 120w universal notebook power supply (ANY0070) **\$99**



Our Price **\$45**

Save **\$24**

WebCode FSP0003

Welland 3.5" External Sata HDD Enclosure With Sata & USB 2.0

SATA to USB 2.0 / eSATA enclosure provides not only SATA to USB 2.0 interface, also SATA to eSATA interface to connect with PC. Up to 1.5Gbit/sec throughput for better data-storage performance.

3.5" Ext IDE HDD - USB 2.0 (WLD0003) **\$66**



Our Price **\$69**

Save **\$20**

WebCode WLD0009

Welland Network Shared Storage Enclosure

Save & Share Files, Music, & Photos With Family & Co-workers Integrated 10/100 Network & USB 2.0 Ports. Up to 83Mbps Throughput. Software Included. Requires 3.5" HDD (Not Included).



Our Price **\$119**

Save **\$20**

WebCode WLD0010

TP-link 54m wireless router with 4 port switch

54M Wireless LAN Router, 2.4GHz, 802.11g/b, built-in 4-port Switch. Adopts 54M Super GTM and 2x to 3x eXtended RangeTM technologies. Up to 4-9 times the range of standard 802.11g/b Access Control, Integrated Firewall

TP-link 54m Wireless USB adaptor (ANY0302) **\$26**

TP-link 54m Wireless PCMCIA adaptor (ANY0303) **\$28**

TP-link 54m Wireless PCI adaptor (ANY0304) **\$26**



Our Price **\$66**

Save **\$11**

WebCode ANY0301

TP-link 108m wireless router with 4 port switch

108M Wireless LAN Router, 2.4GHz, 802.11g/b, built-in 4-port Switch. Adopts 108M Super GTM and 2x to 3x eXtended RangeTM technologies. Access Control, Integrated Firewall, Detachable Antenna

TP-link 108m Wireless USB adaptor (ANY0306) **\$42**

TP-link 108m Wireless PCMCIA adaptor (ANY0307) **\$34**

TP-link 108m Wireless PCI adaptor (ANY0308) **\$36**



Our Price **\$85**

Save **\$14**

WebCode ANY0305

MediaGate 3.5" Hard Disk Media Player

Portable media player allows DivX, MPEG4, DAT, Xvid, MP3, OGG, WMA and JPEG play back.



Our Price **\$235**

Save **\$64**

WebCode ALT2001

Hardware

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 3 Year Warranty



CAN THE DEAL GET BETTER?
Call 1300 658 600 or visit: www.csw.com.au as prices may change due to the daily fluctuations and online discounts. Save price is calculated off the RRP.

Inventor Series

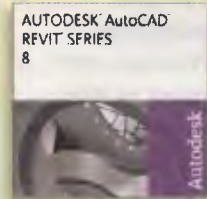
- Autodesk Inventor
- Autodesk Mechanical Desktop
- AutoCAD Mechanical
- AutoCAD (included as part of AutoCAD Mechanical)



Our Price **\$249** Save **\$26**
WebCode.....AUT0105

Revit Series

- Autodesk Revit
- AutoCAD



Academic
Our Price **\$249** Save **\$26**
WebCode.....AUT0113

Autodesk Architectural Desktop 2006

- Autodesk Architectural Desktop
- VIZ Render



Academic
Our Price **\$249** Save **\$26**
WebCode.....AUT0114

AutoCAD, Autodesk Civil 3D and Autodesk VIZ student versions also available separately. See www.csw.com.au for more products!

AutoCAD LT 2007

Enhance your productivity with AutoCAD LT® software, the world's number one-selling drafting and detailing product. AutoCAD LT® 2007 is better than ever. Blocks are now dynamic, Express Tools for better layer management were added, and drafting enhancements abound. Now the tasks you perform every day are streamlined with just one thing in mind—boosting productivity. With full DWG file format compatibility, and access to attached drawings, you've never experienced a more efficient design process.

AutoCAD LT Subscription also available, price on application.



Upgrade
Our Price **\$829** Save **\$70** Full Version
Our Price **\$2025** Save **\$175**
WebCode.....AUT0116 WebCode.....AUT0115

Autodesk VIZ 2006

Award-winning Autodesk VIZ provides a fluid 3D environment for modelling, rendering and animation. Whether you're an architect, land planner or mechanical designer, you can use Autodesk VIZ throughout the design process to develop and explore concepts and alternatives, communicate design intent to clients and validate your design to ensure they are error free. Autodesk VIZ, a multimedia software tool that brings your designs alive.

Upgrade from Version 4 or 5 (AUT0108) **\$745**

Upgrade from Version 3 (AUT0093) **\$745**



Our Price **\$3345** Save **\$175**
WebCode.....AUT0092

AutoSketch 9

AutoSketch 9 software provides a comprehensive set of CAD tools for creating precision drawings—from electrical details to floor plans, from conceptual sketches to product specifications, and much more. Offers straightforward drafting in a Windows XP-like environment plus tutorials and wizards for a fast start.



Our Price **\$220** Save **\$22**
WebCode.....AUT0077

AutoCAD 2007

Design, visualize, and document your ideas clearly and efficiently with AutoCAD® software. From conceptual design through drafting and detailing, AutoCAD 2007® enables you to explore ideas like never before. Create, edit, and develop design alternatives using realistic solids and surfaces in an updated design environment. Communicate your ideas with powerful sketch, shadow, and rendering tools, including intuitive walk-through animations. Then turn your concepts into a set of documents with the new section and flatten functionality. It's all here, whether you're creating, exploring, managing, or communicating, AutoCAD® keeps you on time, on budget, and on track. AutoCAD new and retroactive subscription now available, price on application.

Important Announcement for AutoCAD customers: AutoCAD Upgrades can now only be obtained through AutoCAD subscription, price on application.

Academic (AUT0118) **\$495**

Student (AUT0120) **\$275**



Full Version
Our Price **\$6859** Save **\$181**
WebCode.....AUT0117

Autodesk DWF Composer 2

Accelerate design reviews with Autodesk® DWF™ Composer, the all-digital way to review, mark up, and revise 2D and 3D designs. View and print DWG and DWF™ files with accuracy and fidelity, then measure and annotate the DWF file before round-tripping the markups for revisions. Cycle times, errors, and costs will shrink. Efficiency, however, will soar.

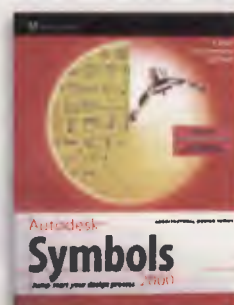
Upgrade (AUT0094) **\$176**



Our Price **\$329** Save **\$23**
WebCode.....AUT0090

Autodesk Symbols 2000

Autodesk Symbols 2000 simplifies routine drawing tasks and boosts productivity through a toolbar-style graphical interface, which guides you rapidly through a wide selection of technically correct symbols. With a click of the mouse symbols are placed easily and exactly where they are needed. Architectural Series contains over 5,600 symbols for building design and documentation. Engineering Series containing over 10,800 symbols covering all aspects of Engineering.



Architectural
Our Price **\$198** Save **\$22** Engineering
Our Price **\$198** Save **\$22**
WebCode.....AC00098 WebCode.....AC00099

See page 2 for details!
smartbuy club
3% rebate
Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy

CorelDRAW Graphics Suite X3

Streamline your workflow with one complete package

Corel Draw Graphics Suite X3 is trusted by busy designers and business users to transform ideas into professional results – fast! With this comprehensive graphics suite, users can confidently tackle a wide variety of projects – from logo creation and web graphics, to multi-page marketing brochures, or eye-catching signs. Now with enhanced illustration, page layout, photo editing, powerful bitmap-to-vector tracing, and helpful new learning tools, this integrated graphics suite delivers the ultimate combination of superior design capabilities, speed, ease-of-use and affordability that cannot be matched by any other graphics software.



Technology & Business Magazine, February 2006



Full Version	Upgrade	Academic
Our Price \$599 Save \$150	Our Price \$275 Save \$74	Our Price \$149 Save \$40
WebCode.....COR8322	WebCode.....COR8325	WebCode.....COR8327

Corel Wordperfect Office X3 – Standard Edition

Work easily, creatively and securely

Get everything you expect in an office suite and more! Includes powerful word processing, versatile spreadsheets, multimedia presentations and new email with lightning fast searching. Open, edit and save Microsoft Word, Microsoft Excel and Microsoft PowerPoint files and PDFs. Create professional looking documents and presentations easily and quickly. Search the Web and access online tutorials right from WordPerfect X3. It's so easy to use, you can get started right away – even if you're new to WordPerfect Office! Trusted by millions. More affordable than Microsoft Office. It's the office suite that makes perfect sense.

Work with Microsoft Office users:

- open, edit and create Microsoft Word, Excel and Powerpoint documents*.
- Create & Edit PDFs without any additional software.

Work with other applications:

- open over 150 different file formats!
- includes *Getting Started with WordPerfect Office X3*, FREE training CD from lynda.com.

* Corel WordPerfect Office X3 will open the majority of files created in Microsoft Word, Excel and PowerPoint.



Upgrade	Student & Teacher Edition	Standard Edition
Our Price \$245 Save \$44	Our Price \$149 Save \$40	Our Price \$449 Save \$120
WebCode.....COR8326	WebCode.....COR8328	WebCode.....COR8323

Corel WordPerfect Office X3 – Home Edition

Work easily, creatively and securely on your home computer

Built for the way you use your home computer, includes easy-to-use software for word processing, spreadsheets, photo and video editing, CD burning, internet security, and more! With WordPerfect Office X3 – Home Edition, you can open, edit and create Microsoft Office files, making it easy to share information. Plus, you can express yourself creatively, work, play, and get things done with one complete suite. WordPerfect Office X3 – Home Edition is priced for a family budget. See for yourself why millions of people depend on WordPerfect Office.

Includes 8 essential products from Corel, Pinnacle & Symantec*:

- 1 WordPerfect X3 – Home Edition: Legendary word-processing power.
- 2 Corel Photo Album 6 Standard Edition: The easiest way to manage your photos.
- 3 Pinnacle Studio SE: Powerful home video editing made simple.
- 4 Norton Internet Security 2006*: The most trusted internet security software.
- 5 Quattro Pro X3 – Home Edition: Versatile spreadsheets.
- 6 Pinnacle Instant CD/DVD LE v8: Complete CD/DVD burning collection.
- 7 OfficeReady Personal Finance Essentials: Plan for your financial future. Includes 85 templates
- 8 Home and School Essentials: Save time with 50 home and school project templates

* Norton Internet Security 2006 the world's most trusted internet security solution and a complimentary 90-day subscription to protection updates.



Home Edition
Our Price \$159 Save \$35
WebCode.....COR8324

Paint Shop Pro X

The easiest way to turn your pictures into professional looking photos – fast!

Corel Paint Shop Pro X delivers a complete set of photo editing tools to help you create professional-looking photos fast! With Paint Shop Pro X you can fix brightness, colour and photo imperfections; compose photos full of depth and imagination; give photos a unique and exciting look, plus, organise and share all your photos with Corel Photo Album 6 – Standard Edition. By combining automatic photo fixes, precision editing controls in a revolutionary Learning Center with organising features, Paint Shop Pro is a first of its kind – and easy-to-use photo editor for anyone who wants to create stunning photos right out of the box.



APC Magazine Editor's Choice November 2005



PC User, October 2005



Full Version	Upgrade	Academic
Our Price \$242 Save \$57	Our Price \$121 Save \$28	Our Price \$165 Save \$34
WebCode.....JAS0034	WebCode.....JAS0035	WebCode.....JAS0036

Corel Photo Album 6

Corel Photo Album 6 is the most complete and easiest-to-use digital photo software. With smart and simple tools that automate everything from download to print, and stunning creative projects, Corel Photo Album 6 is the best way to bring photo collections to life.



Our Price \$84 Save \$5
WebCode.....JAS0038

Corel Painter IX Academic

Features digital brushes, art materials & textures that mirror the look & feel of traditional tools. Take digital design to new levels with the Artists' Oils Painting System, Snap-to-Path Painting, Quick Clone and brushes that perform faster than previously. Create original works of breathtaking digital art.

Full (COR8600) **\$625**
Upgrade (COR8601) **\$363**



Our Price \$154 Save \$35
WebCode.....COR8602

Corel Painter Essentials 3

A complete home digital art studio that helps you turn photos into stunning paintings. Capture your special memories with beautiful, hand-made digital art keepsakes, perfect for sharing with friends and family, and for framing. It's never been easier to learn how to draw and paint, with the included video training and tutorials.



Our Price \$154 Save \$45
WebCode.....COR8683

Design & Publishing

Buying the latest IT Hardware?
Why not extend your warranty?
See page 2 for details!

UP TO
3 Year
Warranty

Total Training Adobe Design Bundle

Get all of the training a creative professional needs with this combination of comprehensive lessons on Macromedia Flash Professional 8 and the Adobe Creative Suite 2 Premium product lines.



Training DVD
Our Price **\$1385** Save **\$78**
WebCode.....TOT0037

Total Training Adobe Creative Suite 2: From Design to Delivery

Uncover valuable techniques to maximize your creative print and web design work flow by understanding how the Creative Suite 2 products work together to create impressive design projects.



Training DVD
Our Price **\$176** Save **\$23**
WebCode.....TOT0030

Total Training for Macromedia® Dreamweaver® 8

The series helps you learn how to efficiently layout, develop, and maintain standards-based websites.

Understand the numerous capabilities of working in this flexible software that is both a design tool and code editor. Learn how to quickly incorporate video and other multimedia into your web site and make more efficient updates.



Training DVD
Our Price **\$275** Save **\$24**
WebCode.....TOT0035

The Design Bundle

Adobe® Design Bundle

The Adobe Design Bundle offers the unified design environment of Adobe Creative Suite 2 Premium software with Macromedia® Flash® Professional 8 software, the industry's choice for creating advanced interactive content. Now with one package, you can design, develop, manage, and deliver a consistent experience using industry standards such as Adobe PDF and Macromedia Flash format—to millions of people around the world in print, on the web, and on mobile devices.

Includes:

Adobe Creative Suite 2 Premium combines:

- Adobe Photoshop® CS2
- Adobe Illustrator® CS2
- Adobe InDesign® CS2
- Adobe GoLive® CS2
- Adobe Acrobat® 7.0 Professional
- Version Cue® CS2
- Adobe Bridge, and
- Adobe Stock Photos

Macromedia Flash Professional 8

Get the best
of both Worlds



NEW



Adobe Design Bundle Upgrade
Our Price **\$1525** Save **\$462**
WebCode Mac.....ALG0062
WebCode Win.....ALG0064

Adobe Design Bundle Full
Our Price **\$2375** Save **\$765**
WebCode Mac.....ALD0010
WebCode Win.....ALD0012

Studio 8

Studio 8 is the essential software suite used to design, develop and maintain interactive online experiences. With latest releases of Dreamweaver, Flash Professional, Fireworks, Contribute and FlashPaper, Studio 8 offers web designers and developers a new level of expressiveness, efficiency and simplified workflow to create websites, interactive experiences and mobile content.

Why Studio

Get the complete toolset.

Studio 8 is the must-have suite for start-to-finish design, development and maintenance of websites, applications, games, interactive presentations, and mobile content.

Express creativity.

Studio 8 offers the broadest range of creative tools for expressiveness and creation of vibrant interactive media, websites, or applications. Use advanced graphics, text, animation, video, and audio tools with precision control and quality.

Academic (AEP1026) **\$479**

Upgrade (ALG0087) **\$645**



Full
Our Price **\$1495** Save **\$477**
WebCode.....ALD0036

Dreamweaver 8

Dreamweaver 8 is the industry leading web development tool, enabling users to efficiently design, develop and maintain standards based websites and web applications. Web developers go from start to finish, creating and maintaining websites to advanced applications that support best practices and the latest technologies.

Academic (AEP1010) **\$315**

Upgrade (ALG0067) **\$325**



Full
Our Price **\$596** Save **\$797**
WebCode.....ALD0014

Fireworks 8

Robust professional tools let you create, edit, and animate graphics, add advanced interactivity and optimize images in an accessible environment.

Get top quality design results.

Take creative control with seamless vector and bitmap editing in an integrated environment. Fireworks automatically responds to tool selections, transitioning smoothly between modes.

Upgrade (ALG0068) **\$255**



Full
Our Price **\$475** Save **\$118**
WebCode.....ALD9578

Contribute 3

Contribute 3 frees designers and developers from web maintenance, allowing others to easily update content in a controlled environment that preserves the integrity of the website. With Contribute 3, websites stay fresh and resources become more focused using a template based, secure web publishing workflow that scales from small groups to full enterprises.

Academic (AEP1006) **\$140**

Upgrade (ALG0060) **\$135**

6 User pack available!



Full
Our Price **\$239** Save **\$57**
WebCode.....ALD0008

Flash Professional 8

Introducing Macromedia's biggest Flash release to date, Flash Professional 8 is the industry's most advanced authoring environment for creating interactive websites, digital experiences and mobile content.

Academic (AEP1014) **\$395**

Upgrade (ALG0072) **\$475**

Flash Basic (ALD0016) **\$625**



Full
Our Price **\$1065** Save **\$311**
WebCode.....ALD0020

See page 2 for details!
smart BUY club
3% rebate
Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy

The Web Bundle

Adobe® Web Bundle

The Adobe® Web Bundle offers Macromedia® Studio 8, the essential solution for web design and development, with the unified design environment of Adobe Creative Suite 2 Premium software. Now with one package, you can design, develop, manage, and maintain rich, interactive experiences for easy delivery to millions of viewers on the web, on mobile devices, and in print using industry standards such as Macromedia Flash® format and Adobe PDF.

Includes:

Adobe Creative Suite Premium Combines full versions of:

- Adobe Photoshop® CS2
- Adobe Illustrator® CS2
- Adobe InDesign® CS2
- Adobe GoLive® CS2
- Adobe Acrobat® 7.0 Professional
- Version Cue® CS2
- Adobe Bridge
- Adobe Stock Photos

Macromedia Studio 8 Combines full versions of:

- Dreamweaver® 8
- Flash Professional 8
- Fireworks® 8
- Contribute™ 3
- FlashPaper™ 2

Get the best of both Worlds



Adobe Web Bundle Upgrade

Our Price \$1416 **Save \$471**

WebCode Mac.....ALG0061

WebCode Win.....ALG0063

Adobe Web Bundle Academic

Our Price \$852 **Save \$265**

WebCode Mac.....AEP1007

WebCode Win.....AEP1008

Adobe Web Bundle Full

Our Price \$2799 **Save \$932**

WebCode Mac.....ALD0009

WebCode Win.....ALD0011

Adobe® Creative Suite 2

Adobe® Creative Suite 2 software is a unified design environment that combines full new versions of Adobe's professional tools with Version Cue® CS2, Adobe Bridge, and Adobe Stock Photos, to deliver the next level of integration in creative software.

- CS2 Premium \$1975
- CS2 Premium Upg \$899
- CS2 Premium PS Upg \$1239
- CS2 Standard \$1449
- CS2 Standard Upg \$575
- CS2 Standard PS Upg \$839



Creative Suite 2 Premium Academic

Our Price \$552 **Save \$261**

WebCode Mac.....AEP9496

WebCode Win.....AEP9497

Adobe® Photoshop® CS2

Adobe® Photoshop® CS2 software, the professional image-editing standard and leader of the Photoshop digital imaging line, delivers groundbreaking creative tools; unprecedented adaptability; and more efficient editing, processing, and file handling.

- Adobe Photoshop CS2 Upgrade \$308
- Adobe Photoshop CS2 Academic \$418



Full

Our Price \$1084 **Save \$366**

WebCode Mac.....ALD9552

WebCode Win.....ALD9553

Adobe® Illustrator® CS2

Adobe® Illustrator® CS2 software gives you powerful new creative options, easier access to tools, and the versatility to quickly produce flexible graphics for print, video, the Web, and mobile devices.

- Adobe Illustrator CS2 Upgrade \$286
- Adobe Illustrator CS2 Academic \$147



Full

Our Price \$861 **Save \$232**

WebCode Mac.....ALD9550

WebCode Win.....ALD9551

Adobe® InDesign® CS2

Join the growing ranks of creative professionals discovering new levels of creative freedom and productivity using Adobe® InDesign® CS2 software. Tightly integrated with the Adobe applications you use most, InDesign CS2 delivers faster production workflows and a more fluid creative environment for designing professional layouts with sophisticated graphics and typography.

- InDesign CS2 Upg \$295
- InDesign CS2 Academic \$265



Full

Our Price \$1242 **Save \$281**

WebCode Mac.....ALD9550

WebCode Win.....ALD9551

Adobe® GoLive® CS2

Unlock the power of CSS with intuitive visual tools, easily take your existing Adobe design assets to the Web, and build and manage Web and mobile sites using the advanced, standards-based coding environment in Adobe® GoLive® CS2 software.

- Adobe GoLive CS2 Upg \$295
- Adobe GoLive Academic \$121



Full

Our Price \$715 **Save \$162**

WebCode Mac.....ALD9548

WebCode Win.....ALD9549

Adobe® Acrobat® 7.0 Professional

Adobe® Acrobat® 7.0 Professional software is the advanced way to create, control, and deliver more secure, high-quality Adobe PDF documents.

- Professional 7.0 Upg \$249
- Pro. 7.0 Upg Std \$249
- Professional 7 Academic \$205
- Standard \$459
- Standard Upg \$152
- Standard Academic \$132



Full

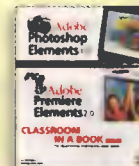
Our Price \$679 **Save \$241**

WebCode Mac.....ALD9526

WebCode Win.....ALD9527

Photoshop Elements 4.0 and Premiere Elements 2.0 Classroom

Classroom in a Book, the best-selling series of hands-on software training workbooks, helps you learn the features of Adobe software quickly and easily.



Book - Paperback

Our Price \$66 **Save \$23**

WebCode.....PGN0266

Adobe Acrobat 7 Classroom in A Book

Adobe has brought the classroom to you in this handy volume, completely revised to cover all that's new and different in Acrobat 7. Through a series of self-paced lessons (each of which builds on the last and includes hands-on projects that the you can create using the files on the accompanying CD-ROM).



Book - Paperback

Our Price \$52 **Save \$17**

WebCode.....PGN0134

Adobe Photoshop CS/CS2 Breakthroughs

Adobe Photoshop is industry standard digital image software and users are hungry for solutions to their myriad concerns—from how best to manage the program's sometimes unwieldy interface to how to use the new Vanishing Point tool.



Book - Paperback

Our Price \$30 **Save \$6**

WebCode.....PGN0157

Web, Design & Publishing

Buying the latest IT Hardware? Why not extend your warranty? See page 2 for details!

UP TO 5 Year Warranty

Wacom Wireless Freedom with Graphire Bluetooth Bundle

With the new Graphire Bluetooth (6x8) you have the ability to do pen based drawing, sketching, illustration and powerful presentations where and when you want.

Bundled software:

- Adobe Photoshop elements 3
- Corel Painter Essentials2
- Inspiration



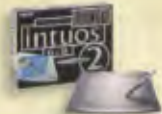
Academic
Our Price **\$375** Save **\$24**
WebCode.....WAC9985

Wacom Intuos3

The industry standard graphics tablet for digital art, animation, image editing and computer graphics. Features ExpressKeys and Touch Strip(s) which can substitute all common shortcuts, the pen delivers professional functionality.

- 1024 levels of pressure sensitivity in the battery free and cordless pen
- 64 degrees of tilt sensitivity

10 Pack (xxxxxxx) \$xxx



Our Price **\$204** Save **\$25**
WebCode.....WAC0050

Wacom Interactive Pen Display

Combines a 15" LCD monitor with a Wacom tablet. It can be easily connected to a projector for enlarged screen. Presenters can hand write and draw on screen with an intuitive pen interface, while students can see the annotations in real-time on the projector. (DTI-520)



Our Price **\$1615** Save **\$44**
WebCode.....WAC0200

Introducing QuarkXPress Version 7

QuarkXPress 7

The industry-leading software for design and layout

QuarkXPress 7 is a tool that will give you amazing creativity and rock-solid productivity. Industry experts are united in calling QuarkXPress 7 one of the most significant upgrades the application has ever seen. Much more than a page layout tool, QuarkXPress provides proven performance with graphics and colour management text processing, Web-page design, XML output and more! QuarkXPress is powerful layout software with an intuitive, versatile interface that lets you combine writing, editing, and typography with colour and pictures to produce dynamic final output. QuarkXPress is widely used by magazines, newspapers, advertising agencies, typesetters, printers, corporate publishers, design firms, catalogue houses, book publishers, and form designers. It is also used by businesses with publishing requirements. QuarkXPress 7 new features:

What's hot for designers & layout pros:

- Transparency and drop shadows
- Composition Zones
- New Measurement palette
- Unicode and OpenType
- Enhanced picture effects and Adobe Photoshop integration
- Quark Job Jackets
- Shared Content
- Tables enhancements

What's hot for print service providers:

- PDF/X
- Output Styles
- PPML output
- Redesigned color manager
- Quark Job Jackets



Launches in
June 2006!

Purchase a Full or Upgrade Version of 6.5 now and receive a Free Upgrade to Version 7 on Release*

Version 6.5 Upgrade
Our Price **\$561** Save **\$34**

WebCode Mac.....QUA0037
WebCode Win.....QUA0038

Version 6.5 Full
Our Price **\$1699** Save **\$96**

WebCode Mac.....QUA0035
WebCode Win.....QUA0036

* Conditions apply.
See www.csw.com.au/promotions for details.

ACT! 8 Standard

Make contact. Build relationships. Get results.

From the #1 selling contact and customer manager, more powerful, easy-to-use. ACT! 8.0 Standard helps selling professionals and small businesses make contact, build relationships and get results. It allows you to:

- Manage up to 50,000 contacts
- Work with 1-9 users sharing the same database
- Create a running history with each contact
- Powerful lookups for easy access to contact details
- Forecast and track sales opportunities
- Integration with Hand-held devices
- Integrates with Lotus Notes and Outlook
- Access critical contact details through Citrix or Terminal services

Academic (ACT7017) **\$155**

Upgrade (ACT7013) **\$154**

6 Pack (ACT7014) **\$1395**

6 Pack Upgrade (ACT7015) **\$745**

6 Pack Academic (ACT7018) **\$735**



**Make Contact!
Build Relationships!
Get Results!**

Full
Our Price **\$275** Save **\$24**
WebCode.....ACT7012

ACT! 8 Premium for Workgroups

Know how to stay in touch with and easily manage thousands of customers?

ACT! users know how! It allows you to:

- Manage up to 100,000 contacts
- Works with up to 50 users sharing the same database
- Create a running history with each contact
- Powerful lookups for easy access to contact details
- Forecast and track sales opportunities
- Integration with Hand-held devices
- Integrates with Lotus Notes and Outlook
- Access critical contact details through Citrix or Terminal services
- Schedule resources for meetings
- Advanced security features
- Synchronise via the internet
- Silent install by installing on the server and deploying out to network users

Academic (ACT7019) **\$259**



**Make Contact!
Build Relationships!
Get Results!**

For pricing and information on volume licensing please contact City Software
1300 658 600

See page 2
for details!

smart
BUY
club
3%
rebate

Did you know that you can get
up to 3% rebate on every order?
www.csw.com.au/smartbuy

Dragon NaturallySpeaking 8 Preferred & Corel Word Perfect Office X3 Home Edition

Dragon NaturallySpeaking Preferred enables small business and advanced PC users to create documents, spreadsheets, and e-mail-all by speaking! Talk to your computer and your words instantly and accurately appear in MS Word and Excel, Corel WordPerfect, and virtually all Windows-based applications. Listen to incoming e-mail and documents read aloud. Search the Web by speaking URLs and links. Use dictation shortcuts that enable you to insert blocks of texts or bitmaps-as your name, title, and signature-with a single voice command. Dictate directly into a PC or any Nuance-approved handheld digital recorder. A noise canceling microphone is included.

Corel WordPerfect Office X3 Home Edition

- Includes 8 Essential Software Packages valued at \$199
 - WordPerfect X3, Home Edition
 - Corel Photo Album 6, Standard Edition
 - Pinnacle Studio SE
 - Powerful home video editing made simple
 - Norton Internet Security 2006
 - Quattro Pro X3
 - Home Edition: Versatile spreadsheets
- Pinnacle Instant CD/DVD LE v8
- Complete CD/DVD burning collection
- WordPerfect OfficeReady
- Personal Finance Essentials
- WordPerfect OfficeReady
- Home and School Essentials

Upgrade (DRG0004) \$247 Academic (DRG0005) \$285

* Available from 17th April 2006 - while stock lasts. Offer available with the Full version only.



Full
Our Price **\$335** Save **\$263**
WebCode.....NUA0005

Nuance PDF Create! 3

The fast, reliable and affordable way to turn all of your PC documents, drawings and images into industry-standard PDF files. Instantly create PDF's that are compact, easy to e-mail, printable and can be viewed on the Web, and that. PDF Create! also gives you all of the advanced features you need, including compressed file sizes, password security, 128-bit encryption, batch conversion of multiple files at time, watermarks, bookmarks, hyperlinks and more.

- Improved Creation Speed
- Reduced and Optimised File Sizes
- International Language Support

Academic (SCA0056) \$69

\$40 Cash Back
You Pay \$80
\$40
After Cash Back*



Full
Our Price **\$80** Save **\$19**
WebCode.....SCA0030

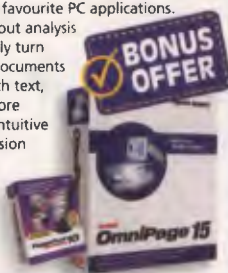
* \$40 Cashback via mail-in redemption from Nuance. Limit of 5 units per customer. Offer ends 30 June 2006. See www.csw.com.au/promotions for details

Nuance OmniPage 15

The latest version of the world's best-selling OCR software, is the most precise way to convert paper and PDF files into your favourite PC applications. Powerful new OCR technology, advanced layout analysis and intuitive editing tools allow you to quickly turn paper and PDF files into editable electronic documents that look just like the original - complete with text, tables and graphics. Not only is OmniPage more than 99% accurate, its improved speed and intuitive proofing combine to make document conversion faster and easier than you could imagine.

Academic (SCA0049) \$225

Bonus PaperPort 10
valued at \$199



Full
Our Price **\$249** Save **\$50**
WebCode.....SCA0044

* Via redemption from Nuance. Offer ends 30 June 2006. See www.csw.com.au/promotions for details.

Nuance OmniPage 15 Professional

The latest version of the world's best selling OCR software, is the most precise way to convert documents and forms into your favorite PC applications. Powerful new OCR engines combine with advanced workflow technology to automate all your conversion needs. Whether you want to make paper digital, convert Quark files to Word, or create batches of PDF files, OmniPage is up to the task with superior accuracy (up to 99%) and formatting. Convert, edit, archive and share all your paper and PDF documents.

Upgrade (SCA0046) \$330

Academic (SCA0050) \$695

Bonus PaperPort 10
valued at \$199



Full
Our Price **\$825** Save **\$174**
WebCode.....SCA0045

* Via redemption from Nuance. Offer ends 30 June 2006. See www.csw.com.au/promotions for details

Nuance Dragon NaturallySpeaking 8 Standard Edition

The fast, easy and accurate way to convert talk into text. Designed for Australian speech and more accurate than ever before - achieve outstanding accuracy levels of up to 99%!

- Talk to your computer and your words instantly and accurately appear in letters, emails, instant messages and chat rooms.
- Use your voice to format and edit in Microsoft Word, Corel WordPerfect, and Internet/email applications.
- A noise cancelling microphone is even included.

Academic (NUA0001) \$85



Full
Our Price **\$165** Save **\$34**
WebCode.....DRG0003

Nuance PDF Converter 3 Pro

The complete PDF solution for business users. PDF Converter Professional offers an unmatched combination of creation, conversion, and editing, plus commenting and security features to give business users total document control and maximum efficiency. Now you can edit directly within a PDF file - just like working in the original file. Standard PDF forms can be instantly converted into fillable PDF forms. Also features new mark-up and commenting tools & cutting edge security features. Less than a third the price of the leading PDF business software and you truly have a cost effective PDF powerhouse!



Academic
Our Price **\$85** Save **\$14**
WebCode.....NUA0002

Full
Our Price **\$156** Save **\$39**
WebCode.....SCA0039

Nuance Dragon NaturallySpeaking 8 Mobile Edition

For the busy professional moving between clients, home and the office, flexibility is a must. The new Dragon NaturallySpeaking Mobile solution lets you dictate documents and notes on the move - now you can work even more efficiently when you are away from your PC. Back in the office simply plug the recorder into the PC, transfer your file and let Dragon NaturallySpeaking Preferred automatically transcribe your dictation. No need to rely on manual transcription - saving you time and money! Dragon NaturallySpeaking Mobile delivers the performance that mobile professionals demand. It includes the Dragon NaturallySpeaking 8 Preferred software, Phillips digital recorder, special linking software and a high-quality headset microphone.

HOT PRICE



Full
Our Price **\$572** Save **\$127**
WebCode.....DRG0007

Nuance Volume Licensing: Now Available!

Nuance Inc. is the leading supplier of imaging, speech and language solutions that are used to automate a wide range of manual processes - increasing productivity, reducing costs and improving customer service. Now whether you are a small work group, large business, government or educational institution you are able to access Nuance's new Volume Licensing.

For pricing and information on volume licensing please contact the CSW Corporate, Government & Education team on **1300 761 761**

Productivity & Organisation

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 3 Year Warranty

MAUS Master Plan Pro

For people who need a winning, professional Business or Marketing Plan. Simple step-by-step question and answer format enables you to construct full financials, text and graphics fast! Sample plans, examples and a unique financial wizard will ensure you prepare a perfect plan every time.



Our Price \$253 **Save \$46**
WebCode.....AU5501

MAUS OH&S Planner

Ensure your business is protected from the loss of time and money associated with injuries and accidents in the workplace with MAUS Health & Safety Planner. Create an OH&S committee, action plans and emergency procedures as well as monitor ongoing safety performance with ease! This is an affordable and practical software application that will guide you step by step.



Our Price \$253 **Save \$46**
WebCode.....MAUS-OHS

MAUS Stockmarket Plus 6

MAUS Stockmarket Plus is a comprehensive, yet simple to use portfolio management tool that allows you to keep track of your investments. The software generates instant profit & loss reports, allows you to test the profitability of different investment opportunities and even provide a tax assessment of your investments!



Our Price \$215 **Save \$34**
WebCode.....MAU0042

FileMaker Pro 8 Advanced

FileMaker Pro Advanced replaces FileMaker Developer and has all the features of FileMaker Pro 8 plus advanced development and customisation tools so you can efficiently build more powerful, more customised databases!

Academic (FIL0165) \$2090
Upgrade (FIL0164) \$1210



Full Version
Our Price \$4180 **Save \$209**
WebCode.....FIL0163

FileMaker Server 8

FileMaker Server 8 is high-performance server software for teams of FileMaker users who want to maximise the performance and security of their shared databases while automating backups and other administrative tasks.

- Maximise performance
- Increase security
- Automate backups

Academic (FIL0162) \$855
Upgrade (FIL0161) \$495



Full Version
Our Price \$1655 **Save \$94**
WebCode.....FIL0160

Limited Special Offer

For a limited time FileMaker Pro 6 through 8 customers are eligible to upgrade to FileMaker Pro 8 Advanced for only AUD\$519 (inc. GST) - a \$350 saving off the regular price.



Offer valid until June 30 2006.
For more details see www.csw.com.au/promotions

Free FileMaker Server 8 Special Workgroup Bundle Offer!

Get 10 teams of FileMaker up and running with FileMaker Pro 8 and host shared databases on FileMaker Server 8. Bundle includes 10 FileMaker Pro 8 licences, one FileMaker Server 8 licence FREE, and 50% off one year maintenance on FileMaker Pro and FileMaker Server.



Offer valid from April 10 to June 30 2006.
For more details see www.csw.com.au/promotions

FileMaker Pro 8 Work Faster. Share More.

FileMaker Pro 8 is the best FileMaker ever! Work significantly faster and share information with more people and programs than ever before with this exciting new FileMaker upgrade. It includes breakthroughs in sharing with Adobe Acrobat and MS Office, as well as new features designed to help you work faster every day.

Academic (FIL0153) \$225
Upgrade (FIL0152) \$275



Full Version
Our Price \$439 **Save \$60**
WebCode.....FIL0151

FileMaker Mobile 8

FileMaker Mobile 8 is a companion to FileMaker Pro 8 designed specifically for Palm OS and Pocket PC handhelds so you can easily extend your FileMaker solutions beyond your desktop to mobile individuals and workgroups.

- Have information at your fingertips while on the go
- Easily manage information while on the go
- Keep your mobile workgroup in sync

Academic (FIL0169) \$59

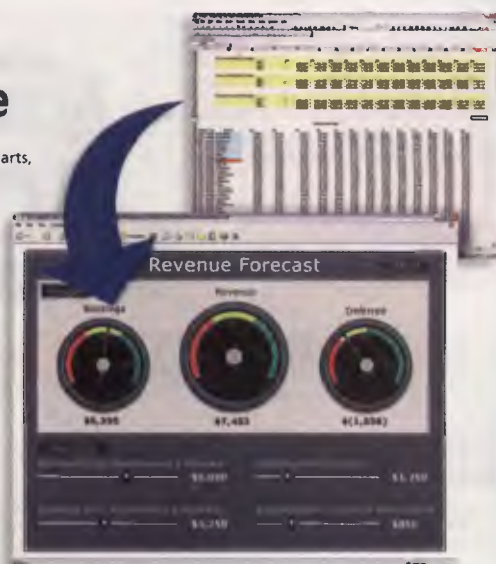


Full Version
Our Price \$107 **Save \$12**
WebCode.....FIL0168

Crystal Xcelsius You've never seen a spreadsheet do this before

Revolutionise Excel spreadsheets with the award-winning Crystal Xcelsius. Point and click to create engaging business presentations filled with dynamic charts, vibrant graphs, and interactive visual analytics. Use visual modeling to analyse multiple "what-if" scenarios and peek into your company's potential financial future. Communicate results to colleagues with one-click integration into PowerPoint, Outlook, PDFs, and the web. Steal the show and see your business in a new light.

Download a Free Trial at www.csw.com.au/trials
Register for a Free Web Seminar at
www.businessobjects.com/anz/crystal_xcelsius



Standard Full	Professional Full	Pro Upgrade from Std	Pro Upgrade from Pro
Our Price \$297 Save \$14	Our Price \$759 Save \$30	Our Price \$451 Save \$16	Our Price \$390 Save \$16
WebCode.....SCX0004	WebCode.....SCX0001	WebCode.....SCX0002	WebCode.....SCX0003

Workgroups
**Contact
Managed
Accounts for
pricing on
1300 761 761**

MYOB Accounting Plus 15

MYOB Accounting Plus 15 packed with the same business management features that you'll find in MYOB Accounting Plus it automates your pay runs, calculates PAYG withholdings, works out the super and then updates all your accounts automatically. Easy! If you bill clients for your time, MYOB Accounting Plus can help you and your team to track every minute and every task performed for them. It's easy to see what needs to be billed and how your employees are spending their time.



Buy with Confidence
for the 2006/2007
Financial Year

Full Version	Upgrade Version
Our Price \$459 Save \$136	Our Price \$249 Save \$100
WebCode.....MYB0043	WebCode.....MYB0045

MYOB Accounting Plus 15 with Cover

NEW! MYOB Accounting Plus with Cover includes all the benefits of Accounting Plus 15, along with a 12 month cover subscription that gives you:

- Unlimited access by phone, fax and email to MYOB's Technical Support Specialists.
- Have new software upgrades sent to you automatically
- Receive PAYG Withholding Tax Table updates automatically
- Receive access to MYOB's M-Powered Services
- Receive regular guides, tips and techniques to get more out of your software. And much more...



Buy with Confidence
for the 2006/2007
Financial Year

**Accounting Plus
with Cover
includes a 12 month
subscription!**

Accounting Plus with Cover
Our Price \$699 Save \$150
WebCode.....MYB0057

MYOB JustInvoices

If you're looking for a better way to prepare your invoices, track your sales and calculate GST received, but you're not after a complete business management system, MYOB JustInvoices is just what you need.



Our Price \$45 Save \$54
WebCode.....MYB0027

MYOB Accounting 15

MYOB Accounting is for businesses that need to streamline accounts procedures and would benefit from improved inventory management, better management of customer and supplier relationships and advanced business reporting.

- Manage your sales, receivables and GST obligations
- Track your purchases and payables
- Keep track of your inventory
- Access M-Powered Services



Buy with Confidence
for the 2006/2007
Financial Year

Full Version	Upgrade Version
Our Price \$230 Save \$119	Our Price \$219 Save \$20
WebCode.....MYB0042	WebCode.....MYB0044

MYOB Premier 9

MYOB Premier gives you the power to manage even the most complex medium-sized business. Get the complete set of business management features as found in MYOB Accounting Plus and also handle transactions and accounts in multiple currencies. MYOB Premier 9 includes integrated payroll, inventory, time billing and multiple currency transaction capabilities. Multiple people can access your business information at the same time, which can help make your processes more efficient. For example, someone can enter a sale while someone else prints a report or enters a cheque. MYOB Premier is also issued with one full year of access to software support and upgrades.



Buy with Confidence
for the 2006/2007
Financial Year

**Includes 12 months
of FREE Upgrades
and Support.**

Full Version
Our Price \$1245 Save \$250
WebCode.....MYB0048

MYOB BusinessBasics

No need to jump between programs (such as spreadsheets and word processors) to get your business done. Now with MYOB BusinessBasics, you can run all your basic business tasks, create quotes, email invoices and enter transactions - from the one easy business program.



Our Price \$125 Save \$24
WebCode.....MYB0004

MYOB FirstEdge - for Mac

MYOB FirstEdge is the easy business and accounting software for small or home-based business on the Mac. Run all your basic management tasks from the one easy business program. MYOB FirstEdge simplifies the way you quote, track and invoice your jobs, simultaneously tracking your transactions and GST, and providing you with over 70 reports to help you understand your business.

- Create quotes that convert to invoices
- Track job costings and profitability
- Email quotes, invoices and reports
- Automatically reconcile your accounts



Full Version
Our Price \$88 Save \$61
WebCode.....MYB0005

MYOB AccountEdge 5 - for Mac

MYOB AccountEdge is issued with a single user licence and with unlimited additional licences available. MYOB AccountEdge gives you the power to manage even the most complex medium-sized business, with a powerful multiple pricing level inventory, multiple currency transaction functionality, integrated payroll, and more.

- Track your inventory and your money
- Process your payroll
- Track your billable time
- Maintain accurate accounts
- Process sales and purchases
- Setup and manage promotions



Buy with Confidence
for the 2006/2007
Financial Year

Full Version
Our Price \$525 Save \$70
WebCode.....MYB0056

MYOB Test Drive

MYOB Test Drive allows you to try Australia's leading business software. With up to 90 days use of MYOB's seven leading products including the Macintosh range, trial Australia's number one range today.



Our Price \$9 Save \$1
WebCode.....MYB0047

MYOB RetailReady USB

Give your store that professional look

- Turn your PC into a powerful Point of Sale System - today!
- Fast customer service
- Easy to set up, use & train staff
- Includes Electronic cash drawer, USB thermal printer and USB barcode scanner
- Photo/Image display
- Integrates with MYOB Accounting, Accounting Plus & Premier



Hardware Bundle	Hardware Redemption
Our Price \$845 Save \$154	Our Price \$845 Save \$154
WebCode.....MYB0040	WebCode.....MYB0041

MYOB RetailManager V9

If you're determined to succeed you need the NEW RetailManager

- Fast customer service
- Advanced Inventory management
- Manages promotions easily
- Reports your sales & profit drivers with just a few clicks
- Includes 12 months of 7 day a week support & upgrades
- Integrates with MYOB Accounting, Accounting Plus & Premier



Full Version
Our Price \$1649 Save \$341
WebCode.....MYB0060

**NEW PRODUCT!
TOO HOT TO SHOW THE
BOX SHOT!**

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 5 Year warranty



Quicken Advantage

Designed so that your focus remains on your business, and not your business software. We enable this by giving you the tools to keep you on top of your software needs. The key benefits of membership include:

- Unlimited weekday technical support on a toll free number.
- All Upgrades sent to you upon release at no additional cost.
- Dedicated Advantage contact numbers to help you stay in touch with Quicken or access our specialised Advantage Technical Support team.
- A personal email as soon as any software updates are available so you download them directly from the web.
- Your own personalised website via www.quicken.com.au with the latest information and updates, to make running your business Quicken.Easy
- Quarterly Advantage Newsletter by email
- Special training offers

Bonus Advantage membership offered on:

- QuickBooks Accounting 2006/07
- QuickBooks Plus 2006/07
- QuickBooks Pro 2006/07
- QuickBooks Premier 2006/07
- Retail Point Of Sale 2006/07
- Retail Starter Kit 2006/07
- QuickBooks Plus 2006/07 Upgrade
- QuickBooks Pro 2006/07 Upgrade
- QuickBooks Premier 2006/07 Upgrade
- Please note that terms and conditions apply to the Quicken Advantage Membership Program

Visit www.csw.com.au/quicken for all the latest Promotions



Looking for the latest Quicken Promotion?

www.csw.com.au/quicken

NEW



NEW



NEW



QuickBooks EasyStart 2006/07

Ideal for new or very small businesses, QuickBooks EasyStart is the simplest way to manage sales, expenses and customers.

- Track Sales and Expenses
- Manage GST and BAS
- Reconcile your bank account
- Extensive help menu available from within the software program

QuickBooks EasyStart judged best-value bookkeeping software.

"Excellent for many small businesses who simply need to cover the essentials of tracking their customers' payments and GST compliance."

Australia PC User, January 2006

"The QuickBooks range offers something for just about every size and type of small business... there's no denying that this is an excellent, well-supported business tool."

Australia PC User, July 2005

Full Version	
Our Price	\$89
Save	\$10
WebCode	QUI0100

Visit www.csw.com.au/quicken for all the latest Promotions

QuickBooks Accounting 2006/07

With powerful reporting and an integrated BAS, QuickBooks Accounting is the solution for small business.

- Integrated BAS
- Import bank statements
- Process credit card statements
- Track GST and prepare BAS
- Audit Company File wizard, to help maintain data integrity

Bonus 12 months technical support and product upgrades with Quicken Advantage*

BONUS Membership valued at \$150!

Full Version	
Our Price	\$225
Save	\$24
WebCode	QUI0101

Visit www.csw.com.au/quicken for all the latest Promotions

QuickBooks Plus 2006/07

QuickBooks Plus is perfect for small business with employees — it includes integrated payroll and inventory management.

- Invoice, pay bills and track expenses
- Process credit card statements
- Track inventory
- Integrated payroll management
- Integrated BAS and online lodgment

Bonus 12 months technical support and product upgrades with Quicken Advantage*

BONUS Membership valued at \$365!

Visit www.csw.com.au/quicken for all the latest Promotions

Subscription		Upgrade Version		Full Version	
Our Price	\$225	Our Price	\$345	Our Price	\$489
Save	\$24	Save	\$54	Save	\$60
WebCode	QUI0104	WebCode	QUI0103	WebCode	QUI0102

See page 2 for details!

smart buy club
3% rebate

Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy

NEW



QuickBooks Pro 2006/07

QuickBooks Pro has all the tools for a professional business, with MS Office integration, designed templates, estimates and job costing — see which projects are making money, and which ones are not.

- Process credit card statements
- Integrated payroll management
- Time billing and job costing
- Integration with Microsoft Office
- Multi User Enabled

Bonus 12 months technical support and product upgrades with Quicken Advantage*

BONUS Membership valued at \$475!

Visit www.csw.com.au/quicken for all the latest Promotions

Subscription	Upgrade Version	Full Version
Our Price \$269 Save \$30	Our Price \$445 Save \$54	Our Price \$715 Save \$84
WebCode.....QUI0107	WebCode.....QUI0106	WebCode.....QUI0105

NEW



QuickBooks Premier 2006/07

The multi user solution — QuickBooks Premier is for two to five users, and has industry-specific editions tailored to your needs.

- Time billing and job costing
- Integration with Microsoft Office
- Multiple currency
- Up to five simultaneous users
- Industry specific editions

Bonus 12 months technical support and product upgrades with Quicken Advantage*

BONUS Membership valued at \$685!

Visit www.csw.com.au/quicken for all the latest Promotions

Subscription	Upgrade Version	Full Version
Our Price \$455 Save \$74	Our Price \$693 Save \$106	Our Price \$1379 Save \$220
WebCode.....QUI0110	WebCode.....QUI0109	WebCode.....QUI0108

NEW



Retail Starter Kit 2006/07 Hard Bundle

If you are opening your store for the first time, or upgrading from a cash register, then Quicken's Retail Starter Kit is what you need. Finding the right software is one thing but then having to find the point of sale hardware that is compatible with your software is another. The Retail Starter Kit has been designed to make getting started easy.

Included:

- QuickBooks Plus 2006/07 for your inventory, customer account, accounting and reporting requirements
- Retail Point of Sale 2006/07 for fast sales processing at the front of store
- Thermal receipt printer
- Cash drawer
- Barcode scanner



Full Version
Our Price \$865 Save \$134
WebCode.....QUI0113

Visit www.csw.com.au/quicken for all the latest Promotions

Quicken Home & Business 2005/06

Monitor your business cash flow and see where your money is going. Keep track of your personal and business bank accounts, credit cards, income and expenses. You can even generate cash-based business tax reports, including Business Activity Statements.

- Customise forms — add your company logo
- New tax rates and Tax Pack questions
- Download daily stock prices from the ASX

Upgrade (QUI0096) \$132
(From Personal 2005, Personal Plus 2005 or Cashbook 2004)

Visit www.csw.com.au/quicken for all the latest Promotions



Full
Our Price \$359 Save \$40
WebCode.....QUI0095

Quicken Personal Plus 2006

Quicken Personal Plus 2006 provides tools to help you manage your finances, prepare for tax time and plan for the future.

- Budgeting tools — help you manage your finances
- Monitor all of your personal and business investments
- Prepare for tax time
- Download your portfolio and trading history.

Visit www.csw.com.au/quicken for all the latest Promotions



Full
Our Price \$139 Save \$10
WebCode.....QUI0099

CAN THE DEAL GET BETTER?
Call 1300 658 600 or visit www.csw.com.au as prices may change due to the daily fluctuations and online discounts. Save price is calculated off the RRP.

Symantec AntiVirus 10.0

Symantec AntiVirus 10.0 protects your clients and servers against viruses, adware and spyware. Easy, centralised management of virus protection.

5 User with Groupware (SYM9640) **\$567**

10 User with Groupware (SYM9641) **\$1049**

10 User (SYM9638) **\$775**

25 User with Groupware (SYM9642) **\$2310**



Symantec Client Security 3.0

More than anti-virus: protection from unauthorised access. Email and the Internet make your business more flexible. However, hackers, viruses, worms, Trojan horses, blended threats, spyware and adware can severely compromise the safety of your computers and business data. Therefore, anti-virus software alone is no longer enough. Symantec Client Security 3.0 seamlessly integrates anti-virus, firewall and intrusion detection actively preventing known and unknown threats from entering your IT system in the first place.

5 User with Groupware (SYM9634) **\$739**

10 User (SYM9632) **\$979**

10 User with Groupware (SYM9635) **\$1365**



Norton AntiVirus 2006

Stay protected with the world's most trusted antivirus software.* Norton AntiVirus 2006 wards off a host of Internet threats. Whether it's surfing or chatting, emailing or file swapping, Norton AntiVirus is continuously at work in the background. It automatically detects and removes viruses, Trojan horses, and worms. It rids your computer of unwanted spyware, adware, and other monitoring software. And it scans both email and IM attachments for threats. Even if your computer is already infected, Norton AntiVirus can quarantine and remove the threat.

*Top-selling antivirus software product from Dec. 2000 through May 2005 based on NPD Group's retail Top Selling Business Software list.

3 User (SYM9662) **\$83**
5 User (SYM9687) **\$121**
10 User (SYM9688) **\$198**



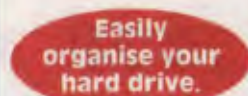
Norton Internet Security 2006 with Norton Ghost 10.0

This special offer pack combines the "keep out" power of Norton Internet Security with the "keep it" power of Norton Ghost. Norton Internet Security automatically blocks hackers, viruses, and spyware; filters out phishing email and spam, protects your personal information, and shields your children from harm in the connected world. Norton Ghost backs up everything on your computer so you can recover files and folders quickly. So even if the worst should happen - say your hard drive crashes - Norton Ghost can help you recover the stuff you care about.



Norton Partition Magic 8

Symantec's Norton Partition Magic 8.0 lets you easily organise your hard drive by creating, resizing, copying, and merging disk partitions. Separate your operating system, applications, documents, music, photos, games, and backup files to reduce the risk of data loss if your system crashes. You can use Norton Partition Magic 8.0 to run multiple operating systems safely.



Norton Ghost 10.0

Save the stuff you care about with the new Norton Ghost. From photos and music to tax documents, Norton Ghost 10.0 automatically backs up everything on your computer. With its new task-driven interface, backups are quick and efficient. So is initial setup. When you load Norton Ghost, it analyzes your system for the best way to store your backups, automatically sets up a backup schedule, and begins backing up right away. Reliable, efficient, and versatile, Norton Ghost optimizes backup space, works with a wide range of media devices, and brings back your entire system in a few short steps.



Norton Internet Security 2006

A comprehensive set of award-winning tools, Norton Internet Security automatically blocks hackers, viruses, and spyware. It filters out phishing email and spam, while its privacy and parental controls protect your personal information and shield your children from harm. And should your operating system or browser have a security hole, Norton Internet Security is there to handle resulting attacks. With all these tools working for you, you're free to get connected, stay connected, and use the Internet however you want.

3 User (SYM9663) **\$145**
5 User (SYM9691) **\$185**



Norton Freedom Bundle

Internet Security 2006 & SystemWorks Premier 2006 With the Freedom Bundle, you have the most comprehensive set of Norton security and performance tools. Norton Internet Security protects you while you surf the Web, shop on the Internet, bank online, share photos with your family and friends by email or IM, or download programs, files and music. And protects your children as they explore cyberspace. The performance tools in Norton SystemWorks Premier keep your computer healthy, optimized and backed up. If trouble does occur, Norton SystemWorks Premier helps you repair the damage, restore your system, and recover your files.



Norton SystemWorks 2006 Premier

Optimize your computer experience with Norton SystemWorks 2006 Premier. This powerful solution offers advanced protection, automatically backing up everything on your computer. It also prevents many problems, keeping your computer healthy and optimized. And when trouble does occur, Norton SystemWorks Premier is there to help you repair the damage and recover your system. Its antivirus protection—the most trusted on the planet*—protects you from viruses, worms, Trojan horses, and dangerous spyware.

*Top-selling antivirus software product from December 2000 through May 2005 based on the NPD Group's retail Top Selling Business Software list.

5 User (SYM9694) **\$215**
10 User (SYM9696) **\$359**



Symantec pcAnywhere 11.5 Host & Remote

Combines secure, industry-leading remote control with remote management and advanced file transfer to help IT personnel quickly resolve helpdesk and server support problems. Offers comprehensive security, including support for 13 authentication types, including RSA SecurID.

Academic (SYE6133) **\$165**
Host only (SYM2566) **\$165**
5 User (SYM2565) **\$572**



See page 2 for details!

smart club 3% rebate

Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy



WIN a Digital Home Entertainment System

When you purchase any Microsoft product from City Software or eStore

- Samsung 101cm 16:9 LCD TV
- Samsung 800Watt Wireless DVD Home Theatre System
- Xbox 360 Entertainment System

Worth Over \$7300!

See www.csw.com.au for details. For terms & conditions and other promotional details, see the Microsoft website. Microsoft and other names are trademarks of their respective owners. See website for other prizes & rules.

Microsoft Windows XP Pro with SP2

Delivers everything you demand from your computing experience. Whether you're on your own or running a business of any size, optimize your productivity with the digital world's latest innovations.

Full (MS59500) \$425

Upgrade (MS59502) \$255



*for non-commercial use only

Academic*
Our Price **\$99** Save **\$15**
WebCode.....MS59501

Microsoft Windows XP Home with SP2

Designed exclusively for home computing. Whether you're working with digital photos, music, or video, or building a home network, Windows XP innovations bring you into the digital age with ease.

Full (MSA5010) \$285



Upgrade
Our Price **\$125** Save **\$14**
WebCode.....MSA5011

MS Works Suite 2006

Five great titles in one affordable package. Includes full versions of Word 2002, Works 8, Encarta Standard 2006, Digital Image Standard 2006 and Money Standard. All the easy to use tools for home organisation, personal finance, photo editing and interactive learning.



Our Price **\$135** Save **\$34**
WebCode.....MSC2935

Why get MS Office 2003?

Microsoft Office 2003 Editions deliver significant improvements over previous versions of Office, including:

- Advanced e-mail management tools to help you fight back against spam and viruses better than ever before.
- Improved automatic document recovery and compatibility with older files, which mean fewer worries about lost data.
- Brand-new collaboration features to allow you to share work easily and stay connected anytime, anywhere.

MS Office 2003 Editions work best with Windows XP

- If you use Windows XP or Windows 2000, then Office 2003 is the right choice for you.

- If you use Windows 98 or Windows Me, you should consider upgrading to Windows XP.

- If upgrading to Windows XP is not an option for you, then Office XP is the best way to go.

*Price drops are strictly limited quantities, for a limited time only! Price drops valid from 1st January 2006 to 31st March 2006.



Pro Edition Academic
Our Price **\$239** Save **\$60**
WebCode.....MSA4222

Microsoft Office	Student & Teacher Edition*	Standard Edition	Small Business Edition	Professional Edition
Word	•	•	•	•
Excel	•	•	•	•
PowerPoint	•	•	•	•
Outlook	•	•	•	•
Outlook with Contact Manager			•	•
Publisher			•	•
Access				•
Enhanced XML Technology				•
Enhanced IRM Technology				•

* For non-commercial use only. Must be a "Qualified Educational User." See Student and Teacher Edition 2003 package for details.

Standard Edition Upgrade Our Price \$359 Save \$65 WebCode.....MSA4221	Standard Edition Full Our Price \$605 Save \$69 WebCode.....MSA4220	Small Business Upgrade Our Price \$418 Save \$81 WebCode.....MSA4226	Small Business Full Our Price \$665 Save \$84 WebCode.....MSA4225
--	---	--	---

*for non-commercial use only

Student & Teacher Edition* Our Price \$209 Save \$40 WebCode.....MSA4237	Pro Edition Upgrade Our Price \$488 Save \$86 WebCode.....MSA4224	Pro Edition Full Our Price \$749 Save \$100 WebCode.....MSA4223
--	---	---

Office 2004 Pro for Mac

Microsoft Office 2004 for Mac Professional Edition gives you all the exciting new features of Office 2004 Standard Edition, plus Microsoft Virtual PC for Mac Version 7 to keep you better connected with the PC users in your professional and personal life.

Licensing pricing available.

Full (MSA3750) \$549

Temporary price drops!

Upgrade
Our Price **\$345** Save **\$74**
WebCode.....MSA3751

Office 2004 for Mac Student & Teacher

Office 2004 for Mac Student and Teacher Edition gives you all the leading presentation, spreadsheet, word processing, and e-mail software found in Office 2004 for Mac Standard Edition in one convenient, specially priced package.

Standard (MSA3747) \$445

Upgrade (MSA3748) \$275

Temporary price drops!

*for non-commercial use only

Our Price **\$175** Save **\$24**
WebCode.....MSA3749

Microsoft Works 8

Works 8 is the latest version of the popular essential home productivity software. It includes a word processor, spreadsheet, database and calendar. Plus, Works 8 has new, professionally designed templates and a new tool to help organise common projects. Buy Works 8 and upgrade to Office for less!



Our Price **\$82** Save **\$17**
WebCode.....MSC2920

Windows Server 2003 R2

This Edition is the network operating system for small organisations and departmental use. It delivers intelligent file and printer sharing, secure Internet connectivity, centralised desktop application deployment, and Web solutions.

Std 5 Client R2 (MSS0061) **\$859**
Std 5 Client R2 (MSS0063) **\$1621**
Std 10 Client R2 (MSS0062) **\$1910**



*Image for illustration purposes only

Std 10 Client R2 Academic*
Our Price **\$1015** **Save \$56**
WebCode MSS0060

MS Project Standard

The new version of Microsoft's core project management program. With familiar, easy-to-use tools, Project Standard enables business managers to manage projects independently from their desktop.

Upgrade (MSA2054) **\$530**

Full (MSA2053) **\$919**



*for non-commercial use only

Academic*
Our Price **\$104** **Save \$9**
WebCode MSA2052

MS Project Professional

The enterprise project management program, works along with Project Server 2003 and Project Web Access to help you more effectively plan projects, better manage resources, and establish organization-wide repeatable processes.

Upgrade (MSA2057) **\$925**

Full (MSA2056) **\$1535**



*for non-commercial use only

Academic*
Our Price **\$287** **Save \$22**
WebCode MSA2055

WIN THE Microsoft XBOX 360 Digital Home Entertainment Package See Pg 39 for details

Visual Studio 2005 Professional Edition

The comprehensive tool for developers working alone or in small teams to deliver the full range of applications on the Microsoft platform. Intuitive and powerful, Visual Studio Professional 2005 speeds the development, debugging and deployment of applications for Windows, the Web, and mobile devices.

- Create dynamic, data-enabled applications. Quickly create data-driven applications using an integrated data access, design, and reporting environment.
- Take advantage of a powerful, enterprise-class application platform.
- Tackle any development task. Create robust applications using the Microsoft® .NET Framework 2.0, the .NET Compact Framework 2.0, and native code-all supported by Microsoft Visual Studio® 2005.

Standard Academic (MSA9848) **\$90**

- Easily create and deploy client applications. Automatically publish and maintain applications and their dependencies with integrated ClickOnce support.
- Build fast, interactive Web applications. Take advantage of more than 50 new controls and hundreds of built-in services for site security, personalization, look and feel, and more.
- Develop faster with enhanced visual designers and editors. Streamline development of all tiers of your application and improve XML editing and XSLT debugging with intuitive visual designers.



Professional Edition	Professional Edition Upgrade	Standard	Standard Upgrade
Our Price \$1275 Save \$112	Our Price \$870 Save \$75	Our Price \$469 Save \$39	Our Price \$311 Save \$26
WebCode MSA9846	WebCode MSA9847	WebCode MSA9849	WebCode MSA9850

SQL Server 2005

SQL Server 2005 is Microsoft's next generation data management and analysis solution that will deliver increased security, scalability, and availability to enterprise data and analytical applications while making them easier to create, deploy, and manage.

- SQL Server 2005 provides the highest productivity for developers building data-driven applications. SQL Server 2005 enables IT professionals to focus on high value tasks by reducing time spent on development, routine operations and management.
- A comprehensive business intelligence platform, with an integrated environment for data integration, analysis, and reporting. Enables organizations to better use insight for enhanced decision making.
- An enterprise-grade database platform that is ready to run the most demanding mission critical applications, with proven performance for some of the world's largest data warehousing and OLTP systems.
- Enables you to confidently deliver highly reliable, available applications to your employees. Provides enterprise scalability allowing you to quickly build and deploy demanding applications. Delivers advanced capabilities to help you secure your organizations' information assets.



Workgroup 5 User	Workgroup 5 User Academic	Standard 5 User	Standard 5 User Academic
Our Price \$1262 Save \$114	Our Price \$684 Save \$34	Our Price \$2947 Save \$267	Our Price \$1049 Save \$52
WebCode MSS8256	WebCode MSS8254	WebCode MSS8247	WebCode MSS8245

One Note 2003

OneNote 2003 replaces the need for a pad and pencil. Capture, organise and access notes on your laptop, desktop or Tablet PC. Record voice in a meeting and use OneNote to mark each new topic of conversation.

Academic (MSA4227) **\$75**



Our Price **\$145** **Save \$12**
WebCode MSA4228

Microsoft Visio 2003 Pro

Microsoft Office Visio Professional 2003 includes a full range of diagrams for business and technical professionals to create network and directory service diagrams, software, database, website diagrams, engineering drawings and building space and floor plans.

Pro Upgrade (MSA4242) **\$374**
Full (MSA4241) **\$737**



*for non-commercial use only

Our Price **\$209** **Save \$36**
WebCode MSA4240

Microsoft Visio 2003 Std

Microsoft Office Visio 2003 gives business and technical users the power to visualise and communicate ideas, information, and systems. Use the simple, flexible tools in Visio 2003 to easily create business and technical charts and graphics that capture your inspiration and communicate it with impact.

Standard Upgrade (MSA4245) **\$150**
Full (MSA4244) **\$297**



*for non-commercial use only

Our Price **\$97** **Save \$11**
WebCode MSA4243

Microsoft FrontPage 2003

Use enhanced design tools to produce better looking Web sites. Generate better code, or expand your code skills. Use built-in scripting tools for interactive results. And with professional coding tools, you can write code faster, more efficiently, and with greater accuracy. Connect with people and information in new ways by building Extensible Markup Language (XML) data-driven Web sites.

Upgrade (MSA4217) **\$165**
Full (MSA4216) **\$319**



Academic*
Our Price **\$148** **Save \$11**
WebCode MSA4215

Microsoft Publisher 2003

Publisher 2003 is a comprehensive solution for creating and publishing a wide variety of publications for desktop printing, commercial printing, e-mail distribution, or viewing on the Web. Publisher 2003 looks and works more like other programs in the Microsoft Office System, making it easier to use the right Office tool for the task.

Upgrade (MSA4235) **\$155**
Full (MSA4234) **\$269**



*for non-commercial use only

Academic*
Our Price **\$142** **Save \$17**
WebCode MSA4233

Microsoft® Digital Image Suite Plus 2006

- Complete photo + video organisation, editing and sharing
- Combines Microsoft Digital Image Suite and Pinnacle Studio software
 - Organise and find photos and videos quicker and easier than ever!
 - Creatively edit and improve your videos and photos with ease.
 - Share your memories with anyone you want by burning movies, photos and slideshows on DVD, VCD or CD-ROM.



Our Price **\$165** **Save \$34**
WebCode MSC2929

See page 2 for details!
smart BUY club 30% rebate
Did you know that you can get up to 3% rebate on every order?
www.csw.com.au/smartbuy

McAfee Easy PC Protection

Protect against viruses, spyware, and hackers at home

McAfee Easy PC protection's intuitive interface provides an effortless way to detect and remove viruses and unwanted programs while managing and controlling internet traffic. With automated daily updates - McAfee Easy PC Protection safeguards you from online identity theft, data loss and slow PC performance while defending against hacker attacks. McAfee Virus Scan Home, Personal Firewall Plus and AntiSpyware all in one box.

Removes viruses and virus-like threats automatically

- Blocks and removes spyware
- Virus security alerts give you up-to-date threat information
- Defends against suspicious mass-mailing activities
- Blocks new, script-based viruses
- Dedicated research and identification of virus outbreaks from AVERT (McAfee Antivirus and Vulnerability Emergency Response Team). AVERT is the top ranked anti-virus research center in the world
- Provides complete, industry-standard firewall protection
- Pre-set security levels, ranging from 'open' to 'lockdown', allows quick configuration of your firewall
- Home networking support makes setting up multiple PCs a snap
- Silent, daily auto-updates to protect you against new threats



Our Price **\$65** Save **\$14**
WebCode MCF2135

McAfee Internet Security

Protect your digital lifestyle at home

McAfee Internet security Suite cleans viruses, helps stop spyware, blocks hackers, identifies spam and protects your identity. Send e-mail and instant messages, share photos and bank and shop on-line with confidence, knowing that your PC is safe from internet threats.

- Remove viruses automatically
- Blocks and removes spyware
- Prevents the spread of viruses to other PCs
- Identifies and blocks potential 'phishing' web sites
- Provides complete, industry-standard firewall protection
- Filters spam and defends against inappropriate internet content
- Silent daily auto-updates



Academic	Full Version
Our Price \$74 Save \$15	Our Price \$96 Save \$23
WebCode MCF2130	WebCode MCF2113

McAfee Managed VirusScan plus Anti-Spyware

Simplified security for Small Businesses

Hands free anti-virus, managed by the McAfee experts! McAfee experts work behind the scenes to protect and update your Desktops and File Servers - 24 x 7, using award-winning McAfee anti-virus technology. This online managed virus scanning software has web-based virus activity reports which let you view the status of your virus protection quickly and easily no matter where you are. Affordable per-computer pricing lowers operational costs while freeing valuable resources.

- URL Software delivery - 100% downloadable
- 100% managed by McAfee experts
- Updates automatically, 24 x 7 - even for PCs not connected to the Internet
- Online virus activity reporting
- Flexible policy configuration
- Easy on-line installation and deployment

Subscription License with one year of Gold Technical Support



5 User	10 User
Our Price \$235 Save \$65	Our Price \$435 Save \$115
WebCode MCF2136	WebCode MCF2137

McAfee Active VirusScan SMB Edition Desktop and File Server Virus Protection for Small Businesses

Proactive computer virus software with a user-friendly, all-in-one management tool for small and medium sized businesses. This next-generation solution delivers a suite of computer virus products that enable you to manage, update and police your systems before any damage is done. Enhanced VirusScan 8.0i protects against unknown malware and newer, blended threats. Also has integrated add on's for Spyware and Firewall protection.

- Downloadable
- VirusScan 8.0i has proactive protection against newer blended threats
- Powerful scan engine stops Macro Viruses, Trojans, Internet Worms and many others
- Stops unwanted programs that track Internet usage and access personal data
- Schedule virus definition updates to occur as frequently as you like
- User-friendly virus activity reports
- Integrated Firewall & Intrusion Prevention
- Telephone Technical Support included 24 hours a day, 7 days a week

Perpetual License with one Year of Gold Technical Support



5 User	10 User
Our Price \$349 Save \$101	Our Price \$659 Save \$191
WebCode MCF2084	WebCode MCF2085

EMC Insignia Retrospect Workgroup For Macintosh

- Protects servers, desktops, and notebooks
- Backs up Macintosh, Windows, and Red Hat Linux computers to a Macintosh computer
- Easy to set up and manage
- Fast, reliable, secure backups
- Smart restores with unparalleled accuracy
- Backup to disk, tape, or optical
- Simplifies media management

Retrospect Desktop 6.1 (DAN0029) **\$209**

Retrospect Server 6.1 (DAN0031) **\$1095**



Workgroup 6.1
Our Price **\$685** Save **\$89**
WebCode DAN0030

EMC Insignia Retrospect Single Server For Windows

- Protects servers, business-critical applications, desktops, and notebooks
- Backs up Windows, Macintosh, Linux, Solaris, and NetWare computers to a Windows computer
- Easy to set up and manage
- Fast, reliable, secure backups
- Smart restores with unparalleled accuracy

Retrospect Professional 7.5 (DAN0012) **\$199**

Retrospect Small Business Server Standard 7.5 (DAN0014) **\$704**

Retrospect Small Business Server Premium 7.5 (DAN0015) **\$1045**

Retrospect Disk to Disk 7.5 (DAN0016) **\$415**

Retrospect Multi Server 7.5 (DAN0017) **\$1775**



Single Server 7.5
Our Price **\$995** Save **\$90**
WebCode DAN0013

Utilities & Security

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 3 Year Warranty

Secure Digital Cards

SanDisk Secure Digital Card

- 256MB (SIM0202) \$28
- 512MB (SIM0387) \$47
- 1GB (SIM0388) \$83
- 2GB (SAN0030) \$132

SanDisk Secure Digital Ultra

- 512MB (SIM0711) \$56
- 1GB (SIM5987) \$99

Compact Flash Cards

SanDisk

- 512MB (SIM0190) \$51
- 1GB (SIM0191) \$83
- 2GB (SIM0690) \$152
- 4GB (SAN0036) \$297

SanDisk Ultra II

- 1GB (SIM1002) \$99
- 2GB (SIM0691) \$152
- 4GB (SAN0023) \$297

XD Picture Cards

Olympus

- 256MB (OLY0010) \$56
- 512MB (OLY0018) \$82
- 1GB (OLY0102) \$135

SanDisk

- 256MB (SIM0385) \$59
- 512MB (SIM0382) \$79
- 1GB (SAN0038) \$132

Memory Stick

Memory Stick Pro Duo

- 256MB (SIM0701) \$39
- 512MB (SIM0702) \$92
- 1GB (SAN0025) \$85
- 2GB (SAN0028) \$272

Memory Stick Pro Duo Gaming

- 512MB (SAN0033) \$59
- 1GB (SAN0022) \$132
- 2GB (SAN0034) \$264

Epson Multimedia Storage Viewer

The Epson P-2000 Multimedia Storage Viewer is a compact and versatile unit, designed to provide photographers with a range of powerful on-demand digital photography and multimedia features. With its Photo Fine high resolution photograph display, video and music file playback, Direct Print capabilities and high-speed USB 2.0 connectivity, the Epson P-2000 is one of the most valuable tools for today's serious still camera photographer.



Our Price \$698 **Save \$101**
WebCode.....EPL2000

Kodak Easyshare V530 5MP

If you want to look great while you're taking great-looking pictures, the V530's your camera. Choose from four high fashion colors, including Midnight Black, Silver Essence, Red Shimmer and Absolute Pink. And with features that make it as powerful as it is petite, you'll have pictures you're sure to show off. Print outs up to 50 x 75 cm and SCHNEIDER Lens.

- Advanced video features
- On-camera picture-enhancing features



5
Megapixel

3x
Optical Zoom

2"
LCD Screen

Our Price \$384 **Save \$116**
WebCode.....KOD0533

Canon Powershot A540 6MP

The feature packed affordable camera for budding photographers

- High speed start-up, fast auto focus, smooth continuous shooting, faster overall processing and superior image quality thanks to the revolutionary DiGIC II Imaging Processor.

- 6.0 Megapixel PowerShot
- Canon 4x optical zoom lens
- Movie recording and playback with sound



6
Megapixel

4x
Optical Zoom

2.5"
LCD Screen

Our Price \$419 **Save \$60**
WebCode.....CAN0484

Sony Cybershot 6MP

The new DSCW508 Cyber-shot squeezes every last bit of performance out of its slim chassis. Packed with a powerful 6.0-megapixel CCD for higher resolution, and a 2.5" LCD it will allow you to take the perfect photo and share it with your friends and family. The new DSCW50 has a compact slim body, a variety of scene selection settings, and equipped with the newly developed anti-blur solution: High Sensitivity Mode.



6
Megapixel

3x
Optical Zoom

2.5"
LCD Screen

Our Price \$450 **Save \$49**
WebCode.....SNY6508

Olympus Tough 720SW 7.1MP

The new Tough 720SW is the latest innovation by Olympus. Olympus prides itself on its revolutionary technology and cutting edge sleek designs, Olympus has gone that one step better, taking digital photography to an entire new level with the introduction of the World's First Shockproof and Waterproof digital camera

- Water Proof (3m)
- Shock Proof (1.5m)
- 19.1 MB Internal Memory



7.1
Megapixel

3x
Optical Zoom

2.5"
LCD Screen

Our Price \$559 **Save \$40**
WebCode.....OLY0075

Sony Cybershot 6MP

The new DSCW30L Cyber-shot is a compact powerhouse of a camera that fits all budgets. Packed with a powerful 6.0-megapixel CCD for higher resolution, it will out perform all expectations. The new DSCW30L has a compact slim body, 400 pictures' stamina, a variety of scene selection settings, and equipped with the newly developed anti-blur solution: High Sensitivity Mode.



6
Megapixel

3x
Optical Zoom

2"
LCD Screen

Our Price \$387 **Save \$42**
WebCode.....SNY6304

Olympus MJU700 7.1MP

The introduction of Olympus's new Mju 700 has created an entire new level in Digital photography. The Mju 700 is the world's smallest and lightest digital camera in the seven megapixel category. The Mju 700 is also the world's slimmest digital camera to feature all weather construction.

With an impressive 7.1 Megapixels and 3x optical Zoom capturing those precious moments with the Mju 700 is a piece of cake



7.1
Megapixel

3x
Optical Zoom

2.5"
LCD Screen

Our Price \$445 **Save \$54**
WebCode.....OLY0074

Canon Ixus 60 6MP

The 6.0 Megapixel IXUS 60 offers a sharp combination of cutting edge technology and ultra compact style. Featuring Canon's fully retractable 3x optical zoom lenses deliver sharp, high resolution images. True to life photo prints straight from the camera are a snap thanks to the Canon Print/Share Button and its huge LCD monitor is the perfect way to review photos and movie clips.



6
Megapixel

3x
Optical Zoom

2.5"
LCD Screen

Our Price \$518 **Save \$61**
WebCode.....CAN0495

Nikon Coolpix S6 6MP

Specifically designed to be highly appealing and easy to use. Boasting great styling, eye-catching wave-surface designs and thin compact dimensions the COOLPIX S6 feel more comfortable in the hand. Also features a rotary multi selector that allows fast circular scrolling for speedy image browsing at up to 10 frames per second. The Rotary multi selector also features a range of buttons that simplify operation, on-screen icons, cursor controlled scrolling. Function select by name or icon and all icon controlled menus.



6
Megapixel

3x
Optical Zoom

3"
LCD Screen

Our Price \$692 **Save \$57**
WebCode.....NIK0054

See page 2 for details!
Did you know that you can get up to 3% rebate on every order? www.csw.com.au/smartbuy

Roxio Easy Media Creator 8

Quite simply, the most complete digital media suite that money can buy. Do more, faster and with greater flexibility and compatibility than ever before.

Contain integrated technology from over twenty five premium products, Easy Media Creator 8 Suite delivers everything you need to edit, backup burn and copy digital video, photo, music and data.



Our Price **\$142** Save **\$33**
WebCode.....ADA7220

Roxio Popcorn

Popcorn helps you easily make high quality copies of your DVD movies. Powerful compression technology gives you the flexibility to copy even the largest movies to a single DVD disc. From the creators of Toast, the fastest and most reliable CD & DVD burning software for the Mac OS.



Our Price **\$79** Save **\$41**
WebCode.....ADA7218

Roxio Toast 7 Titanium

Save, share and enjoy a lifetime of digital music, movies and photos on CD and DVD. Hear your iTunes tracks and classic LPs and tapes on an audio DVD. See your iMovie productions on widescreen DVD or DivX discs, and turn your iPhoto library into stunning HD slideshows. Save and secure your precious files. Copy your audio CDs, movies and DVDs. Do it all with the easiest, fastest, and most-reliable burning software for the Mac.



Our Price **\$127** Save **\$13**
WebCode.....ADA9480

Roxio Photosuite 7 Platinum

Professional photo editing made easy. Correct common photo problems and transform ordinary photos into masterpieces. Create stunning projects like calendars or holiday cards with point-and-click ease. Preserve all your precious memories on CD and share them in the comfort of your living room.



Our Price **\$78** Save **\$32**
WebCode.....ADA7539

Roxio VideoWave 7 Professional

Roxio VideoWave 7 Professional makes it easy to edit and produce Hollywood-style videos complete with music, transitions, special effects, text credits and theater-rich Dolby Digital sound. Author and burn professional-quality DVDs with animated menus and resizable buttons, the video editing software you need.



Our Price **\$108** Save **\$35**
WebCode.....ADA7540

Roxio The Boom Box

Convert the tunes from old LPs and tapes. Capture Internet streams and download podcasts to listen to whenever you want. Automatically create instant playlists. Turn any text from e-books, Web pages, and news feeds into an audio file and send to iTunes with one click. Expand your iPod experience with this essential Mac software collection.



Our Price **\$94** Save **\$5**
WebCode.....ROX0012

Extreme Tech Books

The Extreme Tech range brings you heavy duty technology books for the hard-core enthusiast, providing hands-on tips on everything from hacking your BlackBerry to building your own stand-up classic arcade machine.



- Geek House (WIL0096) **\$35**
- Geek My Ride (WIL0097) **\$35**
- Hacking Google Maps & Earth (WIL0098) **\$35**
- Hacking Photoshop CS2 (WIL0101) **\$35**
- Hacking Video Game Consoles (WIL0102) **\$35**
- Video Blogging (WIL0104) **\$35**
- Build the Ultimate Custom PC (WIL0105) **\$29**
- Build the Ultimate Gaming PC (WIL0106) **\$29**
- Build the Ultimate Home Theatre PC (WIL0107) **\$29**
- Hacking BlackBerry (WIL0108) **\$29**
- Hacking Digital Cameras (WIL0109) **\$29**
- Hacking Gmail (WIL0111) **\$29**
- Hacking GPS (WIL0112) **\$29**
- Hacking MAC OS X Tiger (WIL0113) **\$29**
- Hacking RSS and Atom (WIL0114) **\$29**
- Hacking Skype (WIL0115) **\$29**
- Hacking the PSP (WIL0116) **\$29**
- Hacking Windows XP (WIL0117) **\$29**
- Podcasting (WIL0120) **\$25**



Sybex Books

Regarded as an industry leader, Sybex focuses on titles in the graphics, digital photography, operating systems, programming and gaming categories. Providing widespread coverage in a convenient almanac-sized format, each book includes extensive references, examples and detail.



- Learning MAYA 7 Foundation (WIL0076) **\$79**
- Learning MAYA 7 Modeling & Animation (WIL0077) **\$79**
- Learning MAYA 7 Special Effects (WIL0078) **\$79**
- Mastering Borland Delphi 2005 (WIL0079) **\$69**
- Mastering Windows Server 2003 (WIL0080) **\$69**
- Learning MAYA 7 Unlimited Features (WIL0081) **\$69**
- Discovering the Game with Alias (WIL0082) **\$69**
- Mastering Autodesk & Autodesk LT 2006 (WIL0083) **\$59**
- Art of MAYA (WIL0084) **\$53**
- Mastering MAC OS X Tiger (WIL0085) **\$49**
- Mastering VBA (WIL0086) **\$49**
- Game Artists Guide to MAYA (WIL0087) **\$49**
- Introducing MAYA 7 3D for Beginners (WIL0088) **\$39**
- Networking Complete (WIL0089) **\$29**
- C# Complete (WIL0090) **\$29**
- MAYA at a Glance (WIL0091) **\$29**
- Dungeon Siege II (WIL0092) **\$29**
- Windows XP Complete Professional (WIL0093) **\$25**
- Age of Empires III Guide (WIL0094) **\$25**



Gone Wild Books

Gone Wild is the new series of full colour how-to books for design professionals and enthusiasts. The series is designed to give those with basic graphic design skills the tools they need to create innovative, mind-blowing visual effects. Each book provides lively, step-by-step instructions for creating amazing art using a particular software program.



Gone Wild Photoshop Elements 4 (WIL0067) **\$39**
SAVE **\$15**

Achieve results like the professionals with this easy to read step-by-step guide taking you to the extreme.



Gone Wild Photoshop CS2 (WIL0065) **\$39** SAVE **\$15**
Travel to a side of Photoshop CS2 you have never seen before! Includes 50 wild way out effects in a step-by-step format.



Gone Wild Illustrator CS2 (WIL0066) **\$39** SAVE **\$15**
Hang on tight as Illustrator is about to blow you away! Includes techniques for over the top visuals.



Trend Micro PC-cillin Internet Security 2006

Protection from Viruses, Hackers, Spyware & Phishing for Home and Small Office. Includes a personal firewall to block various types of viruses, worms, Trojans, hackers, and blended threats. Trend Micro PC-cillin also stops and removes spyware, protects against phishing fraud, and blocks spam. Plus, it even guards your wireless network!

Upgrade (MAN0063) **\$54**
Academic (MAN0061) **\$58**
Multiuser packs available!



Our Price **\$85** Save **\$14**
WebCode.....MAN0050

Net Nanny 5 Special Edition

The world's leading parental control software, provides you with the broadest set of Internet safety tools available. Net Nanny gives you control over what comes in and out of your home through your Internet connection, while respecting your values and beliefs. Now Easier to configure than competitors products



Net Nanny Chat Monitor (NAN0002) **\$49**
Our Price **\$43** Save **\$6**
WebCode.....NAN0001

Manacomm ZoneAlarm Security Suite 6

Easy-to-use, comprehensive protection against hackers, spyware, worms, identity thieves, spam and much more. With 12 months of updates and support it is perfect for the home user. Triple Defense Firewall - Goes beyond traditional firewalls to protect your entire PC from hackers, spyware, and other Internet threats.

Pro 6 (CHE0017) **\$74**
Antivirus 6 (CHE0019) **\$74**



Our Price **\$84** Save **\$15**
WebCode.....CHE0018

Utilities & Security

Buying the latest IT Hardware?
Why not extend your warranty?
See page 2 for details!

UP TO
5 Year
Warranty

Pinnacle Studio 10

Pinnacle Studio version 10 provides the ease and power to quickly combine and enhance your precious memories and effortlessly preserve and share them on DVD and beyond.



Our Price \$132 **Save \$47**
WebCode.....PIN0113

Pinnacle Studio 10 Plus

Pinnacle Studio Plus version 10 combines Studio's legendary ease of use with added power and control to further enhance your video for preserving and sharing on DVD and beyond.

Upgrade (PIN0116) \$113



Our Price \$176 **Save \$73**
WebCode.....PIN0114

Pinnacle Studio 10 Media Suite

Pinnacle Studio MediaSuite version 10 combines Studio Plus' legendary ease of use with the added power and control of a host of connected applications to further manage and enhance your video and more for preserving and sharing on DVD and beyond.

Academic (PIN0123) \$143

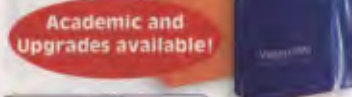


Our Price \$265 **Save \$34**
WebCode.....PIN0115

Sony Vegas 6 & Vegas 6 + DVD

With powerful video and audio production tools, Vegas software provides a complete and integrated solution for digital video, audio recording, editing and mixing, streaming content creation and surround sound production.

Vegas 6+DVD Full (SON0024) \$889



Our Price \$615 **Save \$34**
WebCode.....SON0023

Sony Vegas Movie Studio+DVD Platinum

Import and edit HDV as easily as DV with Vegas Movie Studio+DVD Platinum. Includes: powerful DVD creation tools, over 600 customisable video effects and transitions, 3-wheel primary colour correction, ACID XMC software for music creation, 174 limited-edition sound effects, and the book *HDV: What You Need to Know*.

Standard (SON0045) \$143



Our Price \$215 **Save \$24**
WebCode.....SON0044

Ulead DVD Movie Factory 4

The easiest and quickest way to turn any video and photos into high quality DVD and VCD movies. Burn video straight to disc using no hard drive space. Create impressive motion menus with button and text design control. Produce professional-looking movies to play on any DVD player or computer.

Upgrade (ULE0075) \$57



Our Price \$88 **Save \$11**
WebCode.....ULE0073

Ulead CD & DVD Picture Show 4

Ulead CD & DVD PictureShow 4 makes it easy to create entertaining photo slideshows to watch on TV. Turn your photos into slideshows complete with music, transitions, captions, narration and stunning effects in only three steps. Use Instant-Show theme templates to make outstanding slideshows the first time, every time.

Upgrade (ULE0082) \$54



Our Price \$88 **Save \$11**
WebCode.....ULE0081

Sony ACID Pro 6

ACID Pro 6 software is a full-featured digital audio workstation for composing, recording, editing, mixing, and arranging audio and MIDI. Its signature pick, paint, and play interface and over 1,000 included royalty-free loops get students started creating music right out of the box.

Upgrade from ACID (SON0053) \$385
Upgrade (SON0054) \$195
Academic (SON0055) \$325



Our Price \$515 **Save \$34**
WebCode.....SON0052

Sony ACID Music Studio 6

It's easy to create and share your own music with ACID Music Studio software. Over 1,700 loops for building original songs, remixes, and soundtracks. Record, edit, and mix unlimited tracks of audio and MIDI. Enhance songs with professional audio effects. Burn your own CDs or export to popular formats. Includes exclusive *Show Me How* interactive tutorials.

Academic (SON0049) \$109



Our Price \$149 **Save \$20**
WebCode.....SON0043

Sony Sound Forge 8

The award-winning digital audio editor that includes a powerful set of audio processes, tools and effects for recording and manipulating audio. Sound Forge 8 now includes CD Architect software for producing professional Red Book audio CDs. These industry-standard applications are the professional's choice for audio editing, audio recording, effects processing, streaming content creation, CD mastering, and more. Includes bonus CD Architect and Noise reduction filter valued at \$319



Our Price \$419 **Save \$50**
WebCode.....SON0019

Sony Sound Forge Audio Studio 8

Sound Forge Audio Studio software is everything you need to produce professional-quality audio on your home computer. Record just about anything, edit and restore audio, burn your own CDs, create streaming media, and convert audio files — all using simple commands such as cut, copy, and paste. Includes exclusive *Show Me How* interactive tutorials.



Our Price \$149 **Save \$20**
WebCode.....SON0042

Ulead PhotoImpact 11

A complete image-editing suite with easy-to-use tools for all your image and photo-editing needs. My Workspace fits the program layout to your style. Advanced features match today's digital cameras. Creative tools help you realise your vision, even if you're new to digital photography or want to take creative expression to the next level. PhotoImpact 11 makes professional image editing easy.

Upgrade (ULE0084) \$105



Our Price \$165 **Save \$24**
WebCode.....ULE0083

Ulead My Scrapbook 2

Everything you need to create scrapbook pages, background paper, clip art and titles on your computer. Customise and print a variety of scrapbook-themed pages and background paper to 8.5"x11" or 12"x12" format. Improve not-so-great photos with commonly used photo-editing tools. It's your complete scrapbooking software.



Our Price \$45 **Save \$5**
WebCode.....ULE0056

Ulead DVD Movie Factory 4 Disc Creator

Ulead DVD MovieFactory 4 Disc Creator is a whole new world of CD and DVD making. Burn movies, slideshows, data and music to CD or DVD in an instant.

Upgrade (ULE0076) \$142



Our Price \$175 **Save \$24**
WebCode.....ULE0074

Ulead Video Studio 9

If you've never edited a movie before, make one in three easy steps using the new Movie Wizard mode. Share finished projects on DVD, tape, the Web, and mobile devices. Unmatched stability, high-speed rendering and real-time performance mean less waiting and more time for creating.

Upgrade (ULE0072) \$95



Our Price \$175 **Save \$24**
WebCode.....ULE0071

See page 2 for details!
Did you know that you can get up to 3% rebate on every order?
www.estimate.com.au/smartbuy

ZVue 128MB Portable Media Player

The ZVue 200A is a complete Music, Video & Photo experience all on the go!

Specifications

- 2.5 inch active matrix full colour TFT display
- High quality bright screen for daylight viewing
- 2.5 inch active matrix full colour TFT display
- Media slot for SD or MMC cards
- Plays WMV, Mp4 video
- WMA, Mp3 audio
- Two earphone jacks
- Compact 4.3 x 2.9 x 1.1 inches

1GB Memory Expansion (SIM0388) **\$83**
2GB Memory Expansion (SAN0030) **\$132**

**Includes \$139 of
FREE Downloads**



Our Price **\$189** Save **\$40**
WebCode ZVU0001

Apple 2GB iPod Nano

Take everything you love about iPod and shrink it. Now shrink it again. With 2GB the pencil-thin iPod nano packs the lot into an impossibly small design. Take your music places you never dreamed of. Holds up to 500 songs and full-colour album art. 9 x 4 x 0.7 cm and weighs only 42 grams.

- 1.5" colour LCD display
- Up to 14 hours of battery life
- Works with Mac OS X or Windows 2000/XP

2GB Black (APP0127) **\$289**
4GB White (APP0128) **\$349**
4GB Black (APP0129) **\$349**



Our Price **\$289** Save **\$10**
WebCode APP0126

Samsung 2GB Video MP3 Player

- 2GB Flash Memory
- Video MP3 player
- 262,000 colour, 1.8" widescreen
- DNSe Digital Natural Sound Engine
- Motion capture gaming
- USB Host storage
- JPEG & amp; text viewer
- FM radio with FM record
- Digital voice recorder
- Direct line-in recording



Our Price **\$322** Save **\$57**
WebCode SAM0057

Creative Muvo Micro N200 1GB Mp3 Player

The Creative MuVo Micro N200 is the sleek and ultra-portable MP3 flash player. Incredibly thin design, its packed with the latest features. Enjoy skip free, hi-fi audio while listening to MP3 or WMA's.

256MB, 512MB and 1GB capacities.

Available in 8 colours



Orange
Our Price **\$242** Save **\$57**
WebCode CRE0122

SanDisk Sansa 2GB MP3 Player

Ultra-sleek design, packed with the latest features including excellent navigation, songs sorted by title, artist, album, genre and as playlist support. Available in 512MB, 1 and 2GB capacities.

- Voice recording with built-in microphone
- FM radio with 20-preset stations
- Highly portable MP3 Player
- Hi-Speed USB 2.0 interface & cable for fast transfers
- LCD displays album, artist and title



512MB (SAN0042) **\$95**
1GB (SAN0043) **\$146**

Our Price **\$217** Save **\$42**
WebCode SAN0044

Logitech mm50 Portable Speakers for iPod

The Logitech mm50 Portable Speakers for iPod uses 3" pressure drivers for maximum bass and minimum distortion. Rechargeable Li-ion batteries last up to 10 hours, charge the speaker system and iPod battery simultaneously. 3-D sound processing "widens" the stereo effect, so sound seems to come from an area two feet wider than the speaker itself. Custom travel case, so you can take the big sound anywhere.



* iPod Not Included*

Our Price **\$170** Save **\$60**
WebCode OG3511

Belkin iPod Mini Silicon Rubber Sleeves 3 Pk

The Belkin silicon sleeves provide a great way to preserve your iPod. This value pack comes with 3 colours and a lanyard carrystrap. Available for iPod mini (shown), iPod Shuffle and 4g iPods.

F8Z025-3 iPod Shuffle Silicon Rubber Sleeves (3pk)
Pink, Blue, Frost (BEL9999) **\$30**

F8Z021-3 4G iPod Silicon Rubber Sleeves (3pk)
Pink, Blue, Frost (BEL9998) **\$30**



F8Z018-3 Pink, Blue, Frost (3pk)
Our Price **\$30** Save **\$10**
WebCode BEL9996

Altec Lansing IM7 iPod Speaker System

The ultimate portable audio system for the iPod and iPod mini.

- High Efficiency Digital Amplification
- Maximum Output Neodymium Drivers
- XdB-enhanced Subwoofer
- Built-in iPod Cradle
- AC/Battery Powered
- Wireless Remote



* iPod Not Included*

Our Price **\$399** Save **\$50**
WebCode ALT0055

Apple Hi-Fi

Fill your home with sound, not stereo components. Keep your music collection at your fingertips, not in countless CD cases. iPod Hi-Fi delivers crystal-clear, high-quality sound in a clean, compact design. Just slide your iPod into the built-in Universal Dock to turn on and tune in to digital music as you've never heard it before. From pumping bass to bright treble, iPod Hi-Fi delivers natural, room-filling sound. Close your eyes and you'd think you were listening to a huge stack of speakers.



**Home Stereo
Reinvented**

* iPod Not Included*

Our Price **\$488** Save **\$10**
WebCode APP0221

i-Rocks MP3 CAR DJ FM Transmitter

Plug-in your USB flash drive, mp3 player or any audio source with an output such as your PDA or CD player into the mp3 DJ, tune in your car stereo and enjoy listening to your favourite digital music over while you drive.

Silver (IRS0024) **\$58**
White (IRS0025) **\$58**
Black (IRS0026) **\$58**

Now With Track Recognition



Blue
Our Price **\$58** Save **\$10**
WebCode IRS0023

Nero 7 Premium

Nero 7 Premium enables you to experience your digital media in completely new and innovative ways. With the addition of a Nero Home - media manager, you can now have the complete PC and TV experience. Whether you want to access your media files from the comfort of your living room, or complete digital media projects on your PC, Nero 7 Premium is all you need.

Now, with more features than ever before, this powerful software can transform your digital photos into professional animated slideshows, backup all of your valuable data, manage or search your media files, edit video or photos, create DVDs (including menus), and stream your files over a media server, and compress files to take on the go. Beginners and experts alike will be amazed by what one solution can do. Really, it's that good.

Save and Restore with BackupUp 2

Backup your entire system up on spanning over several CDs/DVDs, schedule an automatic backup with Job Scheduler, drag and drop the files you want to save, create an FTP backup, or password protect your data. Whichever you choose, Nero 7 makes sure that your important files stay right where you need them.

Make your memories last a lifetime!

The days of storing your photos in huge, heavy photo albums are over. With Nero 7 Premium, you can store, manage and edit all of your digital photos with ease. In addition to that, you can turn your photos and videos into slideshows, add transitions and music, burn them to DVD, and then give them to friends and family to watch on their DVD players.



Our Price **\$154** Save **\$45**
WebCode NER0012

Apple iTunes 6:



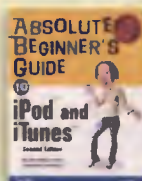
Download it for free
at
www.estimate.com.au/interactive

iPod Guide



Our Price **\$12** Save **\$3**
WebCode.....PGN0192

Beginners Guide



Our Price **\$19** Save **\$6**
WebCode.....PGN0050

Pocket Guide



Our Price **\$24** Save **\$5**
WebCode.....PGN0193

Stater Kit Book



Our Price **\$24** Save **\$5**
WebCode.....PGN0191



Authorized Reseller

estimate & City Software are now authorized Apple resellers!

Tiger OS X

Meet the world's most advanced operating system. Instantly find what you're looking for. Get information with a single click. Mac OS X Tiger delivers 200+ new features which make it easier than ever to find, access and enjoy everything on your computer. Whether that machine is Intel- or PowerPC-based, you'll enjoy 21st century innovations before anyone else. Stay ahead of the curve with Mac OS X.

Mac OS X Tiger will change the way you use a computer. Breakthrough search technology, stunning graphics and media, unparalleled connectivity, an intuitive user interface and a virtual toolbox chock full of cleverly integrated features — all atop a rock-solid UNIX foundation — give you the most innovative, stable and compatible desktop operating system on the planet. Period.



Mac OS X 10.4.3 Tiger	Mac OS X 10.4.3 Tiger Family Pack	Mac OS X 10.4.3 Tiger (10 Pack)	Mac OS X 10.4.3 Server
Our Price \$187 Save \$12	Our Price \$275 Save \$24	Our Price \$1760 Save \$230	Our Price \$1320 Save \$179
WebCode.....APP0154	WebCode.....APP0155	WebCode.....APP0156	WebCode.....APP0159

iLife '06

iLife '06 is the easiest way to make the most out of every bit of your digital life. Use your Mac to collect, organise and edit the various elements. Transform them into mouth-watering masterpieces with Apple-designed templates. Then share the magic moments with dazzling DVDs, perfect podcasts and attractive online journals. All starring you!

Includes:

- iPhoto - Share photos in a whole new way.
- iMovie - Turn home video into cinema.
- iDVD - Create stunning DVDs.
- Garage Band - Record your next big hit.
- iWeb - Put your life on the web.



Our Price **\$119** Save **\$10**
WebCode.....APP0146

iWork '06

iWork '06 features two powerful applications for creating everything from school newsletters to business presentations. With Pages 2, you can quickly create a wide variety of stunning documents. With Keynote 3, you can produce cinema-quality presentations, storyboards and more. iWork '06 lets you express yourself with style.

Includes:

- Pages - Create documents with incredible sense of style. Edit text with enhanced word processing features, add a 3D chart or spreadsheet-style table and perfect your pictures with new image editing tools.
- Keynote - Cinema-quality presentations for everyone. Keynote 3 introduces new features that make ordinary presentations a thing of the past.



Full
Our Price **\$115** Save **\$5**
WebCode.....APP0147

Motion 2

Advanced animation. Instant gratification

Nothing like your old-school motion graphics system, Motion 2 ushers in a new paradigm, offering true film-quality output, GPU accelerated real-time performance and an astounding tool set that lets you create advanced motion graphics with drag-and-drop ease, startling clarity and unprecedented color fidelity.

GPU Accelerated 32-Bit Rendering
Motion is the world's first motion graphics software with GPU accelerated 32-bit float rendering for true film quality. 32-bit float rendering produces extremely fine color accuracy, eliminates banding artifacts and even improves quality when rendering to 8-bit formats. You get great detail, quality and range of color that automatically scales with new generations of GPUs.



Our Price **\$379** Save **\$20**
WebCode.....APP0220

AppleWorks 6.2

The latest version of the best-loved application for the Mac, is a compactly designed and elegantly engineered productivity program that functions the way people think and work. It combines six core capabilities—word processing, page layout, painting, spreadsheet, database, and presentations—into one easy application.

By seamlessly integrating these capabilities with Apple's QuickTime digital technologies, AppleWorks 6.2 makes it effortless to incorporate text, spreadsheets, digital photos, images, sounds, and movies in a single document.



Our Price **\$129** Save **\$10**
WebCode.....APP0219

Extensis Suitcase Fusion

The Ultimate Macintosh Font Manager

Suitcase Fusion is the standard in professional-level font management. Clean, smart and easy-to-use, Suitcase Fusion eliminates the confusion of working with fonts and takes the guess work out of finding and selecting the right font. An integral part of the creative professional workflow, it's a must-have application for serious font users.

- Top-selling font manager in the world!
- Auto-activate fonts in all major creative applications
- Unmatched font previewing capabilities for viewing fonts multiple ways before activating them
- Manage duplicates & OS X System fonts with ease
- Activate fonts directly from the Suitcase Preview Pane

5 User (EXT0085) **\$789**
Academic (EXT0087) **\$105**
Upgrade (EXT0086) **\$87**



Full - Mac
Our Price **\$169** Save **\$30**
WebCode.....EXT0084

Disk Warrior 3

DiskWarrior is the safest, the most technologically advanced, and the most powerful utility to prevent and eliminate directory damage available for any computer. DiskWarrior is not a disk repair program in the conventional sense. Instead of patching the original directory, it uses a patent-pending technology to quickly build a new replacement directory using data recovered from the original directory, thereby recovering files and folders that no other program could recover.

Upgrade (ALS0004) **\$85**



Full
Our Price **\$121** Save **\$28**
WebCode.....ALS0003

See page 2 for details!
smart BUY club 3% rebate

Did you know that you can get up to 3% rebate on every order?
www.csw.com.au/smartbuy



Microsoft XBOX 360

The Xbox 360(tm) video game and entertainment system places you at the center of the experience. Xbox 360 ignites a new era of digital entertainment that is always connected, always personalized, and always in high definition.

Microsoft XBOX 360 comes in two different packages:

Xbox 360: Form and function meet value with the included wireless controller, 20GB hard drive, media remote, HD cable, and more.

Xbox 360 Core System: Everything you need right out of the box, including a wired controller and free level of Xbox Live(r).

Check out more information, demos and other freebies at www.estimate.com.au/interactive

Xbox 360 Genuine Live Gold	Our Price \$95	Save \$4	WebCode ALL5052
MS Xbox 360 Core System	Our Price \$490	Save \$9	WebCode ALL5021
MS Xbox 360	Our Price \$629	Save \$20	WebCode ALL5020

Sony PlayStation2 Console

PlayStation®2, the very best in home entertainment, is sleeker, smaller and more stylish than ever before - and comes in two gorgeous colours, Charcoal Black and Satin Silver. But this dazzling downsizing hasn't extended to the console's superb range of features. PlayStation®2 still has the same awesome processing power, the same immense, diverse library of great games, the same fantastic DVD and CD-playing capabilities, the same stunning versatility... In short, PlayStation®2 offers the same amazing array of entertainment possibilities in a single, simple to use console.

Check out the top 2 best selling PlayStation games: SingStar and Buzz the Music Quiz!

Sing Star Rock bundle includes 2 mic's & 30 rock tracks to let you challenge your friends to Karaoke rock style!

Buzz the big quiz bundle includes 4 buzzers & allows you to challenge 4 teams in a music, video & picture based quiz!

Buzz Big Quiz Bundle	Our Price \$90	Save \$9	WebCode ALL5056
Sing Star Rock Bundle	Our Price \$90	Save \$9	WebCode ALL5057
Sony PS2 Console	Our Price \$253	Save \$6	WebCode ALL5014

The Sims 2

In The Sims™ 2, you direct your Sims over a lifetime and mix their genes from one generation to the next. You set your Sims' goals in life; popularity, fortune, family, romance or knowledge. Give them a long, successful existence or leave their lives in shambles. Take them to extremes, from getting busted to seeing a ghost, from marrying an alien to writing a great novel.

Unleash your creativity with the all-new Create-A-Sim, new building options, and the new in-game movie camera. Get ready to mix their genes, fulfill their dreams, and push them to extremes. What do you want to do with your Sims' lives?

Add one of the Expansion Packs to take Sims 2 to a whole new level! Sims 2 University, Sims 2 Nightlife, Sims 2 Open for Business are all now available to add to your Sims 2 game!

Sims2 University	Our Price \$31	Save \$8	WebCode EAG1080
Sims2 Nightlife	Our Price \$31	Save \$8	WebCode EAG1104
Sims2 Open for Bus	Our Price \$31	Save \$8	WebCode EAG1146
Sims2 S.E	Our Price \$76	Save \$23	WebCode EAG1073

World of Warcraft

As a massively multiplayer online game, World of Warcraft enables thousands of players to come together online and battle against the world and each other. Players from across the globe can leave the real world behind and undertake grand quests and heroic exploits in a land of fantastic adventure. At long last, the world of Azeroth, first glimpsed in Warcraft I and further enhanced in subsequent strategy games, is realized in glorious detail and ready for the arrival of millions of prospective players. So step upon the hallowed shores of this embattled world, and see what journeys await for those who would plumb this ancient realm's many secrets.

Try the game online yourself with a free downloadable trial at www.estimate.com.au/interactive! Alternatively buy a \$2, 15 Day Trial CD from any eStore Pick Up Point or eStore online

World Of Warcraft Game	Our Price \$75	Save \$14	WebCode VUG1127
30 Day Time Card	Our Price \$35	Save \$4	WebCode VUG7000
Strategy Guide	Our Price \$27	Save \$12	WebCode PGN0022
Burning Crusade Exp.	Our Price \$62	Save \$7	WebCode VUG1175

Get the latest games for PC, PS2, XB, PSP & more!

XBOX360

GAMES	WebCode	Our Price	Save
Tiger Woods PGA TOUR 06	EAG7000	98	11
NBA Live 06	EAG7002	98	11
Need For Speed: Most Wanted	EAG7003	98	11
Fight Night Round 3	EAG7004	98	11
Burnout Revenge	EAG7005	98	11
Battlefield 2: Modern Combat	EAG7006	98	11
Ridge Racer 6	EAG7007	98	11
FIFA 2006 FIFA World Cup	EAG7008	98	11
Superman Returns	EAG7009	81	18
Top Spin 2	TAK7003	81	18
Amped 3	TAK7005	81	18
NBA 2K6	TAK7006	81	18
NHL 2K6	TAK7007	81	18

Civilization IV

Civilization IV will come to life like never before in a beautifully detailed, living 3D world that will elevate the gameplay experience to a whole new level. Civilization IV has already been heralded as one of the top ten games of 2005, and a must-have for gamers around the globe!



PC	Our Price \$71	Save \$18	WebCode TAK1110
----	----------------	-----------	-----------------

Age of Empires III

Age of Empires III will offer gamers the next level of realism, with advanced battle physics and unparalleled visual detail. The new game picks up where Age of Empires II: Age of Kings left off, placing gamers in the position of a European power determined to explore, colonize and conquer the New World.



PC	Our Price \$78	Save \$21	WebCode MSC3022
----	----------------	-----------	-----------------

PC BASED GAMES

GAMES	WebCode	Our Price	Save
SingStar Pop	ALL5004	44	6
Buzz! The Music Quiz	ALL5010	90	10
Aeon Flux	ALL5011	74	6
American Chopper	ALL5054	28	2
Fantastic Four	ALL5072	45	4
EyeToy Play 3 Bundle (Game + USB Camera)	ALL5427	90	9
Sing Star 80s (Game Only)	ALL5452	45	4
Sing Star Pop (Game Only)	ALL5456	45	4
FIFA 2006	EAG2080	73	16
NBA Live 2006	EAG2081	73	16
Rugby 06	EAG2099	57	32
World Poker Tour	TAK0231	41	8
Zathura	TAK0232	41	8

Battlefield 2: Special Forces

Award-Winning Battlefield 2 Expands to include Covert Ops. In Battlefield 2: Special Forces, players will choose to fight as one of 6 different Special Forces soldiers - Navy SEALs, British SAS, Russian Spetsnaz, MEC Special Forces, Rebel groups and insurgents. Armed with the latest Special Forces weaponry, players can take control of any of the game's 10 new vehicles to engage in major conflicts with up to 64 players.

Battlefield 2 (EAG1093) \$76



PC	Our Price \$31	Save \$8	WebCode EAG1117
----	----------------	----------	-----------------

CAN THE DEAL GET BETTER?
Call 1300 658 600 or visit: www.cw.com.au as prices may change due to the daily fluctuations and online discounts. Save price is calculated off the RRP.

Games & Accessories

Buying the latest IT Hardware? Why not extend your warranty! See page 2 for details!

UP TO 3 Year Warranty

WIN with the **Microsoft** **XBOX360** **Promotion**

**Exclusive for City Software
& eStore customers!**



**Purchase any Microsoft product from
City Software or eStore, between 20th April & 31st May,
to go in the draw to win!**

See pages 24, 39 & 40 for the latest Microsoft range!!

www.csw.com.au
www.estore.com.au

For terms & conditions, along with permit details, please see www.csw.com.au/promotions.
Authorized under permits NSW TPL 06/03532 and ACT TP 06/01484

narristechology



TECRA A3X GREAT VALUE NEW EXCLUSIVE BUNDLE

\$1799

S9161 | Rent* \$20.16 /wk

- Intel Pentium M740 1.7GHz
- 512MB DDR2 RAM
- 60GB HDD
- Dual Layer DVD Burner
- Wireless LAN
- 15" XGA Screen
- Windows XP Pro

See page 9 for details

BONUS TARGUS BUNDLE



TAX TIME SAVINGS

LaCie 8GB Carte Orange USB 2.0 Key

See page 24
for details



\$199 | T3091
Save \$50

HP dx5150 MT Desktop

See page 24
for details

Athlon64 3200+
1GB RAM
160GB HDD
DL DVD±RW



\$899 | T5212



HP OfficeJet Pro K550 Printer

See page 42 for details

**\$100
CASH
BACK!**

\$329 | T3724



NEED A PRINTER??

CALL 1300 13 9999 | CLICK ht.com.au | VISIT see back for details



Some items in this catalogue are for delivery only. Delivery charges apply.

INDEX

DESKTOPS, NOTEBOOKS, SERVERS
& HANDHELD PDAs

Samsung Notebooks	6
Toshiba Notebooks	8-9
Acer Notebooks & Desktops	10-11
HP Notebooks & Desktops	12-13
Sony Notebooks	14
Palm PDAs	18

BACK-UP & NETWORKING

Netgear	28-29
Netcomm	30
Comsol	31
D-Link	32-33
Linksys	34
Engin	35

DISPLAYS & PROJECTORS

Samsung Monitors	4
Toshiba Projectors	7
Sony Projectors	15
NEC Monitors	16

PRINTERS, SCANNERS &
CONSUMABLES

Samsung Printers	38-39
HP Printers	40-44
HP Consumables	45
Konica Minolta	45
Epson	46
Canon	47
Brother	48
Consumables	49

ACCESSORIES

Samsung MP3	5
Apple	17
Logitech	19
Targus	20
Microsoft	21
Belkin	25

STORAGE & MEDIA

Seagate	22
Sandisk	23
Lacie	24
Maxtor	26-27
Region4	36
Pioneer	37
Verbatim	50

SOFTWARE APPLICATION

Ulead	37
Manacomm	51
Corel	51
Channel Worx	52
MYOB	52
Adobe	53
Microsoft	54-56
Filemaker	57
Quicken	58-59
Scansoft	60
Business Objects	60
Symantec	61
Scholastic	62

Services	63
Terms & Conditions	63

MAKE ADDITIONAL SAVINGS ONLY WHEN SHOPPING ONLINE

Buy any of these products at ht.com.au and receive our special online only price.

Available only when you buy online between 1 - 31 May 2006

McAfee Internet Security Suite 2006

Comprehensive security for online peace of mind

- Prevents viruses from infecting your PC
- Prevents hackers from invading your PC
- Stops unwanted, inappropriate and malicious email
- Protects against spying and pop-up ad programs
- Helps stop identity theft

The Internet provides a wealth of information and entertainment at your fingertips. Yet, as soon as you connect, your computer is exposed to a multitude of privacy and security risks. The best defence is a multi-layered approach with McAfee Internet Security.

Our all-in-one security suite incorporates award-winning McAfee technology so that you can surf, shop, download and email in confidence. Easy to install, configure and use, McAfee Internet Security helps safeguard personal data, prevent viruses, stop unauthorised computer access, filter spam from your inbox and block pop-up ads - all in one powerful, fully integrated package. Best of all, automatic updates ensure you always have the latest protection.



SAVE 20%
Normal Price \$115

MCAfee

\$89¹

T6634

Linksys WRT54GC Wireless G Compact Router

The heart of your secure small office network

- All-in-one Internet-sharing Router, 4-port Switch, and Wireless-G Access (802.11G) Point
- Shares a single Internet connection and other resources with Ethernet wired and Wireless-G and B devices
- Compact travel size router with built-in antenna
- **High security:** Wi-Fi Protected Access (WPA/WPA2 Personal), wireless MAC address filtering, powerful SPI firewall

FEATURES:

- Complies with 802.11g and 802.11b (2.4GHz) Standards
- Unsurpassed Wireless Security with Wi-Fi Protected Access™ (WPA/WPA2 Personal)
- Compact travel size router with built-in antenna
- All LAN Ports Support Auto-Crossover (MDI/MDI-X) - No Need for Crossover Cables
- Connect an optional external antenna to increase reception and range (external antenna not included)



SAVE 25%
Normal Price \$119

LINKSYS
A Division of Cisco Systems, Inc.

\$89¹

T4688

¹ All online purchases are subject to terms & conditions and returns policy. Delivery charges may apply. Offers not available in Business Centres or via phone. Limited supply per customer (except SA).

HOT OFFERS

harristechnology



Hot offers

HOT OFFERS FOR MAY

HOT OFFER 1

SANDISK SECURE DIGITAL CARD 256MB

SanDisk SD cards give you plenty of room to capture and store all your precious photos, safely and securely. Fast, and built to last, you can count on SanDisk SD cards to be ready when you are, every day.

Advanced Features:

- High transfer rate for fast copying and downloading
- Built to last, with an operating shock rating of 2,000Gs, equivalent to a ten-foot drop**
- 5-year limited warranty

**Based on SanDisk internal testing

**SAVE
\$12**



\$19

G3995

HOT OFFER 2

PURCHASE A 50 PACK SPINDLE OF VERBATIM DVD-R OR DVD+R FOR \$42 AND RECEIVE A BONUS DVD TOWER



DVD-R 4.7GB 16x White
InkJet Printable
50 Spindle

DVD+R 4.7GB 16x White
InkJet Printable
50 Spindle



\$42

T4573 DVD+R
T4157 DVD-R

HOT OFFER 3

LOGITECH V200 CORDLESS NOTEBOOK MOUSE - SILVER



**SAVE
\$36**

Maximize your productivity and minimise downtime with Logitech's V200 Cordless Notebook Mouse. It combines the best of both worlds delivering superior cordless performance with virtually no interference and an unsurpassed battery life of up to one year. The 2.4 GHz micro-receiver snaps into the mouse for transport while turning it off. A battery light indicator tells you when power is low. And the tilt wheel lets you scroll in more directions from side-to-side and zoom in and out, for easy viewing of large photos or spreadsheets. USB connector. 3-year warranty.

- Up to nine months of operation on two AAs
- Battery indicator light
- Tilt wheel for up-and-down and side-to-side scrolling, plus zoom
- New 2.4GHz Micro-Receiver
- Receiver snaps into base for transport and turns the mouse off
- Business Class Mobility
- For Windows XP/Me/2000/98/ Mac OS X 10.1.2+

\$29

S3296

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

VISUAL DISPLAY OF CHOICE

WHY SAMSUNG...?

Zero Pixel Defect

Samsung's Zero Pixel Defect policy provides for warranty replacement if any pixel defect is discovered during the monitor's 3 year warranty period.



MagicTune™

MagicTune

Included with all Samsung LCD screen's is Samsung's MagicTune™ software. MagicTune™ allows you to quickly and easily make display adjustments using your mouse rather than through an onscreen menu. MagicTune™ features include colour calibration, brightness/contrast, geometry adjustment and remote asset management.

MagicColor

MagicColor

Samsung MagicColor will automatically optimise the colours onscreen depending on the content - works great with games, business graphics and displaying accurate skin tones in photos.

MagicBright

MagicBright

Samsung MagicBright provides different brightness levels depending on the application - settings include Text, Internet, Entertain and User Adjust.

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

19" LCD MONITOR



920N - ANALOGUE

- Response time: 8ms
- Maximum resolution: 1280 x 1024
- Contrast ratio: 700:1
- Interface: Analogue
- Stylish design with ultra-narrow screen bezel
- 3 year on site exchange and zero dead pixel policy^



T3827 SILVER

\$479

17" LCD MONITOR



740N - ANALOGUE

- Response time: 8ms
- Maximum resolution: 1280 x 1024
- Contrast ratio: 600:1
- Interface: Analogue
- Ultra narrow screen bezel
- 3 year on site exchange^

S9509 BLACK

\$369

S9511 SILVER

\$369

21" LCD MONITOR



BONUS DVD PLAYER

215TW - ANALOGUE/DIGITAL

- Response time: 8ms
- Maximum resolution: 1680 x 1050
- Contrast ratio: 1000:1
- Inputs: Digital, Analogue, S-Video, Component and Composite
- Height adjustable with pivot and swivel stand
- 3 year on site exchange and zero dead pixel policy^



Rent* \$12.31/

T6656

\$1,099

20" LCD MONITOR



204B - ANALOGUE/DIGITAL

- Response time: 5ms
- Maximum resolution: 1600 x 1200
- Contrast ratio: 800:1
- Interface: Analogue / Digital
- Height adjustable with pivot and swivel stand
- 3 year on site exchange and zero dead pixel policy^



Rent* \$10.63/

T4409 BLACK

\$899

T4408 SILVER

\$899

^Please contact Samsung Electronics Australia on 1300 362 603 or email monitor.service@samsung.com for full Terms and conditions. *Bonus DVD Player via redemption from Samsung. Bonus only for purchases on the 215TW between 01/05/06 to 31/05/06. Visit www.samsung.com/au/215TW for full terms and conditions. Postage charges apply.



SAMSUNG MP3 PLAYERS

SAMSUNG YP-Z5 SERIES MP3 PLAYERS

Imagine listening more... with an amazing 35 hours battery
 Imagine hearing more... with WMA subscription support and storage for up to 1000 songs* (on 2GB)

Imagine seeing more... with choice of wallpaper and photo slideshows on a stunning 1.8" screen

Imagine feeling more... with DNSe 3D surround sound and a durable, brushed aluminium case.

FEATURES:

- Super long 35 hour battery
- Durable aluminium casing
- Large 1.8" 262,000 colour screen
- Sort music by artist, album, playlist
- Photo wallpaper and slideshow
- DNSe Digital Natural Sound Engine with Street Mode
- Subscription service ready

* Capacity will vary according to format, song length and bit rate



T6775 2GB BLACK **\$299**

T6777 2GB WHITE **\$299**

SAMSUNG YP-U2 SERIES MP3 PLAYERS

FM Radio, Voice Recording and DNSe 3D Sound

FEATURES:

- FM Radio
- Full sized USB connection
- Digital Voice Recorder
- Blue light effect
- DNSe Digital Natural Sound Engine with Street Mode
- 13 hours battery time
- USB 2.0
- Can be used as a mass storage device
- Plug and play compatible



T6767 512MB BLACK **\$119**

T6771 1GB WHITE **\$169**

SAMSUNG YP-F1 SERIES MP3 PLAYERS



The YP-F1 with its fashionable design lets you wear the player as a necklace or just clip it anywhere on to your clothing. Change covers to be different, whenever you want to (Samsung provides three face plates included in standard packaging).

FEATURES:

- 512MB or 1GB storage capacity
- USB 2.0 capability
- FM radio and FM record
- Voice recording
- Up to 10 hours playback time
- Approximately 240 songs in WMA format or 120 songs in MP3 format (for 512MB model)
- Approximately 480 songs in WMA format or 240 songs in MP3 format (for 1GB model)

S9194 512MB **\$155**

S9195 1GB **\$199**

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



EXCLUSIVE LATEST PRODUCT BUNDLES

POWER DRIVE WITH
SAMSUNG X60!WITH INTEL DUAL CORE
TECHNOLOGY

The Samsung X60 introduces itself with the latest advancements in computing including the brand new Intel Centrino Duo Mobile Technology, 15.4" widescreen and everything wireless. Take advantage of the increased efficiency of an Intel Core Duo Processor, with dual core technology accelerating optimised programs to almost twice the speed.

- Intel Core Duo T2300 1.6GHz Processor
- 2x512MB DDR2 RAM
- 80GB* hard drive
- 15.4" WXGA Gloss Display
- DVD SuperMulti Dual Layer Drive
- Wireless LAN 802.11a/b/g
- Bluetooth
- Remote control
- Weighs 2.5kg
- Solid magnesium casing
- Windows XP Professional
- 3 year on site warranty



Rent* \$28.30/wk
\$2,649

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

ULTRA SLIM AND ULTRA SLICK - SAMSUNG X1

Samsung X1 Mobile Centrino notebook is the ultimate for mobile users providing the functionality of a 15" notebook at the weight of a standard 12" notebook, and packed with unique AV features. Weighing in at a very portable 1.7kg, with a slick innovative ergonomic keyboard design, remote control to navigate your media player and PowerPoint slides, and top loading optical drive, all for your added convenience. The X1 is more than just a notebook!

- Intel Pentium-M 753 ULV 1.2GHz Processor
- 2x256MB DDR2 RAM
- 60GB* hard drive
- 14.1" WXGA Display
- Top loading DVD Dual Layer Drive
- Wireless LAN 802.11a/b/g
- Remote control
- Bluetooth
- 4-in-1 Media Reader
- Weighs 1.7kg
- Windows XP Professional
- 3 year on site warranty



Rent* \$30.50/wk

\$2,899

SAMSUNG Q35 COMPACT ALL-IN-ONE

WITH INTEL DUAL CORE
TECHNOLOGY

THE BEAST WITHIN

Want grunt without the added weight? No longer are you required to sacrifice performance because of size, the Samsung Q35 is equipped with the latest Intel Centrino Duo mobile technology and packed with the all the wireless connectivity. At 1.8 kg with a DVD dual layer, 80GB hard drive and offering over 6hrs battery life, don't let this compact design fool you; this beast is very well disguised!

- Intel Core Duo T2300 1.6GHz Processor
- 2x256MB DDR2 RAM
- Removable 80GB hard drive
- 12.1" WXGA Display
- DVD SuperMulti Dual Layer Drive
- Wireless LAN 802.11a/b/g
- Bluetooth
- Up to 6 hour battery life
- Weighs 1.89kg
- Windows XP Professional
- 1 year on site warranty



Rent* \$27.76/wk

\$2,599

*Accessible capacity of hard drive may be less due to pre-installed software and recovery partition.

¹While stocks last.

TOSHIBA

harristechnology



Projectors

TOSHIBA PROJECTORS

The Ultimate in Quality and Performance - T100/TW100 Projector

Perfect for the board room or any mobile professional, the T100/TW100 is a super bright DLP business projector with multiple inputs for impressive presentations every time. The TW100 model includes wireless capabilities for added convenience.

KEY FEATURES:

DLP Technology
XGA (1024 x 768) resolution
Impressive brightness: 2600 ANSI-Lumens
Includes remote with laser pointer and carry case
4 Inputs for easy media switching via remote
User logo and security password settings
Blackboard mode allows projection onto coloured walls

TW100 ADDITIONAL FEATURES:

802.11b/g Wireless projection with audio
Auto focus and power zoom for easy set-up
USB Memory Key presentation capability



Rent* \$31.55/wk

\$2,999

Rent* \$36.45/wk

\$3,499

T6346 T100

T6348 TW100 - WIRELESS

TDP-S8 SVGA PROJECTOR



DLP Technology

SVGA (800 x 600) resolution
Brightness: 2000 ANSI-Lumens
2000:1 contrast ratio
Digital keystone correction
Compact 2.0kg
Includes soft carry case and remote control

Rent* \$15.45/wk

\$1,379

T6351

TDP-T9 XGA PROJECTOR



DLP Technology

- XGA (1024 x 768) resolution
- Brightness: 2000 ANSI-Lumens
- 2000:1 contrast ratio
- Eco mode: reduce noise and extends lamp life
- Compact 2.0kg
- Includes soft carry case and remote control

Rent* \$21.06/wk

\$1,879

T6349

POWERFUL PORTABLE PROJECTOR



*Ultimate
Portability
Only 1kg*

The Toshiba TDP-P8 produces bright, crisp detailed images all from a tiny chassis weighing a mere 1kg. Featuring XGA resolution, a high contrast ratio of 2100:1 and easy set up functions the TDP-P8 is the perfect portable projector solution

KEY FEATURES:

- **DLP Technology**
- XGA resolution
- Ultra portable: only 1kg
- High contrast ratio: 2100:1
- Brightness: 1500 ANSI-Lumens
- Auto-Image setup
- Digital keystone correction
- Includes mouse remote with laser
- Freeze function
- Eco mode: reduces the operating noise and extends the lamp life

Rent* \$27.34/wk

\$2,559

T3878

RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

QUALITY ASSURANCE WARRANTY ON ALL TOSHIBA PROJECTORS:

- 3 year parts and labour
- 90 day lamp and faulty product replacement

LEADER IN NOTEBOOK TECHNOLOGY

TECRA A7
POWERFUL, DESKTOP
REPLACEMENT

Stunning array of performance features includes Intel Core Processor, advanced docking capabilities and easy connectivity options with Toshiba ConfigFree. Perfectly suited to both the home and office.

- Intel Core Duo T2300 1.6GHz Processor
- 512MB DDR2 RAM
- 60GB hard drive#
- 15.4" WXGA Wide screen
- DVD SuperMulti double layer drive
- ATI Mobility Radeon X1600 w/ 128MB dedicated VRAM
- WiFi a/b/g & Bluetooth 2.0
- TPM & Finger Print Security
- Windows XP Professional



Rent* \$25.09/wk

A8714 **\$2,349**

Also available in Core Duo T2400 1.8GHz, 512MB RAM, 100GB* HDD, and 15.4" WXGA+ screen

Rent* \$31.34/wk

A8725 **\$2,979**

*RENTSMART

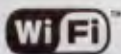
The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

SATELLITE PRO A100

The Satellite Pro A100 is a reliable, cost effective desktop replacement notebook that eases your entry into the world of mobile computing. Offering a choice of the latest Intel Centrino mobile technology, including the Core Solo processor for exceptional mobile performance or the Celeron M processor for the perfect balance between mobile processing technology and exceptional value.



BOTH MODELS INCLUDE (unless otherwise stated):
15.4" WXGA screen, WiFi b/g, Microsoft OneNote



A100

- Celeron M 360 1.4GHz
- 40GB hard drive#
- 256MB DDR2 RAM
- DVD/CD-RW Combo Drive
- Windows XP Home



Rent \$11.71/wk

T6823

\$1,045

A100

- Intel Core Solo T1300 1.6GHz
- 60GB hard drive#
- 512MB DDR2 RAM
- DVD SuperMulti Drive
- Windows XP Professional



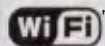
Rent \$17.87/wk

T6824

\$1,595

ULTRA PORTABLE AND TABLET SERIES

Ready to work when and where you are, the Portégé and Libretto series delivers an advanced combination of ultra portability and expansion capability. Behind the compact design lies a power base ready to maximise performance with Intel Pentium M processors, large memory, and built-in wireless communication to keep you well connected.



Portégé M400 Tablet

ALL MODELS INCLUDE (unless otherwise stated):
2x256MB RAM, 60GB hard drive*, 56K V.90 & 10/100 LAN, WiFi a/b/g, Bluetooth, 3 year warranty and Windows XP Professional

PORTÉGÉ R200

- Pentium M 753 1.2GHz ULV
- 12.1" XGA TFT display
- No optical drive
- Up to 5 hrs battery life
- Weight: from 1.3kg

Rent* \$34.71/wk

S9625

\$3,299

PORTÉGÉ M400 TABLET

- Intel Core Solo T1300 1.6GHz
- 512MB DDR2 RAM
- 12.1" XGA TFT display
- Optional internal optical drive available
- Bluetooth Antenna
- Weight: from 2kg
- XP Professional Tablet

Rent* \$32.61/wk

T5498

\$3,099

PORTÉGÉ M400 TABLET

- Intel Core Duo T2400 1.8GHz
- 512MB DDR2 RAM
- 80GB hard drive#
- 12.1" SXGA+ TFT display
- Optional internal optical drive available
- Weight: from 2kg
- XP Professional Tablet

Rent* \$40.82/wk

T5499

\$3,999

TECRA M4 TABLET

- Pentium M 760 2GHz
- 512MB DDR2 RAM
- 80GB hard drive#
- 14.1" SXGA+ TFT display
- DVD SuperMulti Double Layer
- Weight: 2.8kg
- XP Professional Tablet

Rent* \$39.57/wk

T4944

\$3,799

*Accessible capacity of hard drive may be less due to pre-installed software and recovery partition.

LEADER IN NOTEBOOK TECHNOLOGY

TECRA A3X SPECIALS



NEW EXCLUSIVE Bundle

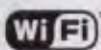
3 GREAT BUNDLED ITEMS¹
Targus Notebook Essentials Bundle includes a carry bag, mouse, and 4 port USB hub

A3X

- Intel Pentium M 740 1.7GHz processor
- 512MB DDR2 RAM
- 60GB* hard drive
- 15" XGA TFT (1024 x 768) screen
- DVD SuperMulti Double Layer Drive
- 56k V.92 modem and LAN
- Wireless LAN 802.11a/b/g
- PCMCIA: 1 x Type II
- Weight: 2.7kg
- Battery life up to 4 hours
- Microsoft XP Professional
- 12 months warranty



Microsoft
Windows XP
Professional



Only available while stocks last. Not available in conjunction with any other offer.

Rent* \$20.16/wk

S9161

\$1,799

HUGE VALUE MOBILE PACK

ALL YOU NEED TO GET MOBILE!



GREAT VALUE

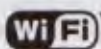
4 GREAT BUNDLED ITEMS¹
Targus Messenger Bundle includes a Vibe 15.4" messenger case, retractable mouse, 4 port USB 2.0 hub and 128MB flash drive!

A3X

- Intel Pentium M 750 1.8GHz Processor
- 512MB DDR2 RAM
- 60GB* hard drive
- 15" SXGA+ TFT (1400 x 1050) screen
- DVD SuperMulti Double Layer Drive
- Wireless LAN 802.11a/b/g
- Up to 4 hours of battery life
- Weight: 2.7kg
- Windows XP Professional
- 12 months warranty



Microsoft
Windows XP
Professional



Only available while stocks last. Not available in conjunction with any other offer.

Rent* \$24.08/wk

S7643

\$2,149

*Accessible capacity of hard drive may be less due to pre-installed software and recovery partition.

SATELLITE PRO P100

The Satellite Pro P100 is the high-end multimedia notebook built for business, offering very high quality graphics and audio capacity. Featured Intel Core Duo Processor, enabling enhanced performance and improved battery life. It incorporates Toshiba EasyGuard to secure, protect, connect and optimise your investment.

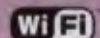


With Intel Dual Core Technology

- Intel Core Duo Processor T2400 1.8GHz
- 17" TruBrite WSXGA+ (CSV)
- 512MB DDR2 RAM
- 100GB* hard drive
- DVD SuperMulti Double / Dual Layer
- Wi-Fi 802.11a/b/g and Bluetooth 2.0
- Microsoft Windows XP Professional



Capitino
Level



Bluetooth



Microsoft
Windows
Professional

Rent* \$34.71/wk

A7575

\$3,299

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

BUSINESS SOLUTIONS AT AN AFFORDABLE PRICE

ACER 17" LCD MONITOR



AL1716S - Analogue

- Maximum resolution: 1280 x 1024 @ 75 Hz
- Response time: 12ms
- Contrast ratio: 500:1

T3247

\$349

ACER 19" LCD MONITOR



AL1916S - Analogue

- Maximum resolution: 1280 x 1024 @ 75 Hz
- Response time: 12ms
- Contrast ratio: 500:1

T4734

\$439

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

DUAL CORE PROCESSOR
THE ULTIMATE IN PERFORMANCE

AcerPower F5 DUAL CORE PC

- **Processor:** Intel Pentium D 820 2.8GHz Dual Core (2 x 1MB Cache, 800MHz FSB)
- **Memory:** 1024MB PC 4300 DDR2-SDRAM
- **Hard Drive:** 250GB* SATA 7200RPM
- **Optical Drive:** 16x Dual Layer DVD Writer (burns & plays DVDs and CDs)
- **Graphics:** ATI Radeon X550SE HM 256MB
- **Sound:** Realtek ALC880 with 5.1 channel support
- **Speakers, keyboard and mouse included**
- **Operating System:** Windows XP Professional
- **Warranty:** 1 year limited onsite



Image for illustration purposes only



Rent* \$14.56/wk

T6179

\$1,299

ACER 26" WIDESCREEN LCD TV



- Screen size: 26" / 66cm
- Maximum resolution: 1280 x 768
- Brightness: 450 cd/m²
- Contrast ratio: 600:1
- Integrated speakers - SRS WOW
- Multiple inputs
- Warranty: Limited 3 years

Rent* \$14.56/wk

A8728



\$1,299

ACER 32" WIDESCREEN



- Screen size: 32" / 81cm
- Maximum resolution: 1366 x 768
- Brightness: 550 cd/m²
- Contrast ratio: 800:1
- Integrated speakers - SRS WOW
- Multiple inputs
- Warranty: Limited 3 years

Rent* \$20.16/wk

A8729



\$1,799

*Accessible capacity of hard drive may be less due to pre-installed software and recovery partition. These products are for delivery only. Delivery charges apply. See page 63 for details.

HOT ACER NOTEBOOK DEALS

ASPIRE 3624WXCi MOBILITY WIDESCREEN PORTABLE - GREAT VALUE!

The Aspire 3620 is the perfect partner for enhancing your efficiency and success with its combination of robust processing power, good looks, communications and lightweight/dependable design.

- Intel Celeron M 380 1.6GHz
- 256MB DDR2 RAM (upgradeable to max. 2GB)
- 14.1" WXGA (1280x800) CrystalBrite widescreen
- 40GB* hard disk
- DVD/CD-RW combo drive
- 3x USB 2.0 ports
- Modem / LAN
- WiFi 802.11b/g with Signal Up technology
- Up to 2.5 hours of battery life
- Weighs 2.35 kg
- Windows XP Home



Rent* \$13.43/wk

YOU PAY \$899

A7616

EXCLUSIVE TO HARRIS TECHNOLOGY!

TRAVELMATE 4062WLMi WITH WIDESCREEN

Work with freedom and experience a brand new approach to productivity! The new TravelMate 4062 combines Intel Centrino technology featuring a comprehensive feature set to offer one of the most practical notebooks available today.

- Intel Pentium M 740 1.7GHz
- 256MB DDR2 RAM
- 15.4" WXGA wide screen
- 60GB hard disk*
- DVD±RW Dual Layer Drive
- 56Kbps modem
- 10/100 LAN
- WiFi 802.11g with SignalUp Technology
- Up to 5 hours of battery life
- Windows XP Professional

* Limited Stock



Rent* \$17.92/wk

\$1,599

T3774

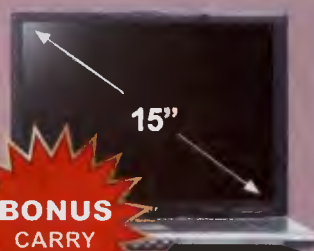
BOOST YOUR WIRELESS CONNECTION WITH ACER SIGNALUP

A breakthrough that boosts wireless performance by a minimum of 25%. Acer technology provides a more stable signal with higher quality wireless both outdoors and in difficult indoor environments.



* Accessible capacity of hard drive may be less due to pre-installed software and recovery partition. † \$100 cashback redemption available until 31 May 2006 via www.acer.com.au/cashback. Offer only available while stocks last. Not available with any other offer. Standard postage fees apply. ‡ While stocks last.

WITH INTEL DUAL CORE TECHNOLOGY



TRAVELMATE 4202LMi

The TravelMate 4202 is well balanced to optimise your productivity and amplify your success, combining solid performance with wide ranging functionality

- Intel Core Duo T2300 1.6GHz
- 512MB DDR2 RAM
- 15" XGA screen
- 80GB hard disk*
- DVD±RW Dual Layer Drive
- 4 x USB 2.0
- Modem / LAN
- WiFi 802.11g with SignalUp Technology
- Up to 5 hours of battery life
- Windows XP Professional



Rent* \$21.06/wk

\$1,879

T5012

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For more details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

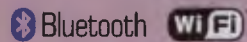
HP COMPAQ HOT DEALS

DUAL CORE, MORE POWER!

The HP Compaq 6320 Notebook PC series provides the ideal balance of connectivity, security, and mobility with a large, crisp display to maximise productivity.



- Intel Core Duo T2400+ 1.8GHz
- 512MB DDR2 RAM
- 60GB 5400rpm hard disk
- Dual Layer DVD+/-RW Drive
- Up to 128MB shared graphics memory
- Wireless LAN 802.11 a/b/g
- 7-in-1 Media Reader
- LAN and Modem
- Bluetooth
- 15" XGA Screen
- Windows XP Professional



T6762 Rent \$25.63/wk
\$2,399

Also available in Core Duo T2500 2GHz, 1GB RAM, 80GB HDD, and 15" SXGA+ Screen

T6763 Rent \$30.50/wk
\$2,899

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

HP nx6125 - EXCELLENT VALUE FOR POWER!

POWERFUL & FEATURE PACKED WITH 64 BIT PROCESSOR FOR FUTURE UPGRADES

The HP Compaq nx6125 Notebook PC is a smart balance of mobility, affordability and security. At just 2.72kg, this thin and light design features AMD Turion 64 Mobile technology and has an integrated Biometric Fingerprint Sensor, 6-in-1 media reader and spill resistant keyboard.

- AMD Turion 64 ML-37 2GHz 64 bit processor
- 1GB DDR RAM (2x512MB)
- 80GB# hard drive
- ATI X300 graphics with 128MB shared VRAM
- 15" XGA screen
- DVD±RW dual layer burner
- 56K V92 modem and Gigabit LAN
- Wireless LAN 802.11b/g
- 2 x USB 2.0 ports
- HP Biometric fingerprint reader
- 6 in 1 media reader
- Up to 3.5 hours battery life (additional travel battery optional)
- Microsoft XP Professional
- 1 year warranty



Only available while stocks last.

Rent \$19.04/wk

\$1,699

T5013

HP NX BUSINESS SERIES

PACKED TO PERFORM, PRICED TO PLEASE

The HP Compaq nx series Business Notebook are packed with advanced technology features offering solid performance at a surprisingly affordable price. What's more, most models come with wireless connectivity so that you can get the job done effortlessly, wherever your work takes you.

Image for illustration purposes only.



MODEL	nx6125	nx6120	nx6120	nx8220	nx9420
PROCESSOR	Sempron 3000+	Cel-M 360	P-M 740	P-M 750	Core Duo T2500
CLOCK SPEED	1.8GHz	1.4GHz	1.7GHz	1.8GHz	2GHz
RAM	256MB	256MB	512MB	512MB	1GB
HARD DRIVE	40GB#	40GB#	40GB#	60GB#	100GB
SCREEN	15" XGA	15" XGA	15" XGA	15.4" WXGA	17" WSXGA+
OPTICAL DRIVE	Combo	Combo	DVD+RW+DL	DVD+RW	DVD+RW+DL
WIRELESS LAN			802.11g	802.11a/g+BT	802.11a/g+BT
WARRANTY	1 year	1 year	1 year	1 year	1 year
RENT*	\$12.27/wk	\$13.95/wk	\$19.60/wk	\$24.52/wk	\$40.82/wk
PART NUMBER	T6324	R7182	F7734	F7736	T665
PRICE	\$1,095	\$1,245	\$1,749	\$2,295	\$3,999

*Accessible capacity of hard drive may be less due to pre-installed software and recovery partition. *All models listed in the above table come with Windows XP Professional, except nx6125 (T6324) that is packaged with Windows XP Home.

HP DESKTOPS

HP DX5150 MICROTOWER PC

EXCLUSIVE TO HARRIS TECHNOLOGY



Rent* \$10.07/wk

\$899

Processor: AMD Athlon 64 3200+
RAM: 1GB PC3200 DDR400
Hard Drive: 160GB* SATA (7200RPM)
Optical Drive: 16x DVD±RW LightScribe Drive
(Double Layer/Dual Format)
Operating System: Microsoft Windows XP Professional
Keyboard and Mouse included
Warranty: 3 year parts/ 1 year labour and onsite



T5212

HP DX7200 SLIM TOWER PC DUAL CORE PROCESSOR

- **Processor:** Intel Pentium D 820 2.8GHz Dual Core
- **RAM:** 512MB PC4200 DDR2-533 RAM
- **Hard Drive:** 80GB* SATA (7200RPM)
- **Optical Drive:** 48x/32x Combo CD-RW/DVD-Rom
- **Operating System:** Microsoft Windows XP Professional
- Keyboard and Mouse included
- **Warranty:** 3 year parts/ 1 year labour and onsite



Desktop and Monitor bundle pictured (T4602)



Rent* \$14.56/wk

\$1,299

A7547 DX7200 SLIM TOWER PC

Rent* \$19.04/wk

\$1,699

T4602 DX7200 SLIM TOWER PC + 17" LCD

*Accessible capacity of hard drive may be less due to pre-installed software and recovery partition.
*Certain restrictions and exclusive conditions apply. Consult HP customer service on 13 13 47 for details.

HP MONITORS



HP L1706 17" LCD MONITOR - ANALOGUE

- Panel Type: 17" Active Matrix TFT
- Brightness: 300 cd/m2
- Contrast Ratio: 500:1
- Resolution: 1280 x 1024
- Warranty: Limited 3 years parts, labour, and on-site service - including backlight*

S9519

\$499



HP L1906 19" LCD MONITOR - ANALOGUE

- Panel Type: 19" Active Matrix TFT
- Brightness: 250 cd/m2
- Contrast Ratio: 500:1
- Resolution: 1280 x 1024
- Warranty: Limited 3 years parts, labour, and on-site service - including backlight*

Rent* \$6.71/wk

S9396

\$599

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

SONY®

VAIO NOTEBOOKS

SONY NOTEBOOKS



VGNTX27GPB

The latest TX27GP redefines mobility! Besides the impressive specifications, the TX27GP features a robust carbon fiber chassis that's resistant to bumps and knocks. Essential for business travellers who carry their notebooks everywhere. Carbon fibre is as strong as steel yet much lighter.

- Carbon fibre chassis
- Built-in DVD±RW Dual Layer Drive
- 11.1" Wide XGA Clear Bright LCD
- Pentium M ULV 753 1.2GHz
- 1GB RAM
- 60GB HDD*
- WiFi and Bluetooth 2.0+EDR
- Weighs just 1.25kg
- Instant AV
- Sony multimedia software pack
- Windows XP Professional



13688

Rent* \$38.53/wk
\$3,699

SOFT CARRY POUCH (TX series)

T3353

\$49

PORT REPLICATOR (TX series)

38549

\$359

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

SZ SERIES

WORK. PLAY. WORK. PLAY.

Life's pretty unfulfilling if you've got one and not the other. That's why we've designed the VAIO SZ series notebook to let you do both. From presentations to computer games, from videoconferencing to movie editing and DVD creations, there are no limits to what you can achieve.



BOTH MODELS INCLUDE (unless otherwise stated):

DVD±RW Dual Layer Drive, 13.3" Wide XGA Clear Bright LCD, 512MB RAM, nVidia Go 7400 graphics, Wireless LAN 802.11a/b/g, MOTION EYE camera, Bluetooth, hard drive shock protection, Windows XP Professional.

VGNSZ15GP

- Intel Core Duo T2300 1.6GHz
- 60GB* HDD
- Magnesium alloy chassis
- Up to 6 hours of battery life
- Weighs 1.85 kg

Rent* \$31.55/wk

54209

\$2,999

VGNSZ18GP

- Intel Core Duo T2400 1.8GHz
- 80GB* HDD
- Biometric fingerprint protection
- Carbon fibre chassis
- Up to 7 hours of battery life
- Weighs 1.69 kg

Rent* \$38.53/wk

20464

\$3,699

FE SERIES

With the powerful Intel Centrino Duo Mobile Technology and the new Clear Bright High Colour 15.4" wide LCD screen, this is the perfect business notebook. Conduct business conferences with the integrated MOTION EYE camera and Bluetooth 2.0+EDR.



BOTH MODELS INCLUDE (unless otherwise stated):

Magnesium alloy chassis, DVD±RW Dual Layer Drive, 15.4" Wide XGA Clear Bright LCD, 512MB RAM, GeForce Go 7400 graphics, Wireless LAN 802.11b/g, Bluetooth, Windows XP Professional.

VGNFE15GP

- Intel Core Duo T2300 1.6GHz
- 80GB* HDD

Rent* \$24.56/wk

65597

\$2,299

VGNFE18GP

- Intel Core Duo T2400 1.8GHz
- 100GB* HDD

Rent* \$29.45/wk

20375

\$2,799

VGNBX168GP

- Magnesium alloy chassis
- 15.4" Wide XGA Clear Bright LCD
- Pentium M 760 2GHz
- 512MB RAM, 60GB* HDD
- WiFi and Bluetooth 2.0+EDR
- DVD±RW Dual Layer Drive
- Removeable drive expansion bay
- Motion eye camera
- Security features
- Windows XP Professional

Rent* \$26.70/wk

93097

\$2,499

VGNFJ68GP

- Magnesium alloy chassis
- DVD±RW Dual Layer Drive
- 14.1" Wide XGA Clear Bright LCD
- Pentium M 750 1.8GHz
- 512MB RAM
- 60GB* HDD
- WiFi 802.11b/g
- Motion eye camera
- Windows XP Pro

Rent* \$22.40/wk

33786

\$1,999

*Accessible capacity of hard drive may be less due to pre-installed software and recovery partition.

SONY®

harristechnology 

Projectors & Cameras

CAPTURE, BURN & DISPLAY WITH SONY

LCD PROJECTORS

BRIGHT IMAGES

GENTLE ON THE EYES

NATURAL COLOURS



HIGH PERFORMANCE | LOW COST

ULTRA PORTABLE PROJECTOR



NEW

- 2000 ANSI lumens
- SVGA (800 x 600) resolution
- Unique user-friendly design
- Lightweight, just 2.9kg
- Multiple inputs
- Quiet operation, as low as 29dB
- 6 Picture modes
- Ceiling mountable
- 2 years limited warranty*

(*warranty conditions apply)

VPLES3

Rent* \$16.80/wk

\$1,499



- 2000 ANSI-Lumens
- XGA (1024x768) resolution
- Slim (52mm) and stylish design
- Advanced intelligent auto set-up
- Multiple inputs
- Power zoom and focus
- Security password authentication system
- Remote control and carry case supplied
- 2 years limited warranty*

(*warranty conditions apply)

VPLCX20

Rent* \$25.63/wk

S7487

\$2,399

SONY CYBERSHOT DIGITAL STILL CAMERAS



DSCW50S

- 6 megapixel
- 3x Optical zoom
- Large 2.5" vibrant colour LCD
- Up to 390 shots per charge
- 32MB internal memory
- Memory Stick DUO slot for increased card capacity
- Includes battery and charger

T6010

\$479



BONUS
256MB MEMORY
STICK PRO DUO

DSCT7S

- 5.1 effective megapixel Sony Super HAD CCD
- 3x optical / 6 x Precision Digital / Smart
- 2.5" clear photo LCD screen
- **Ultra thin pocket sized design**
- Real Imaging Processor
- PictBridge Direct Print Compatible
- STAMINA InfoLithium battery supplied
- Manual, scene and burst modes
- MPEG Movie VX Fine with Sound

Rent* \$7.38/wk

S2337

\$659

SONY MEMORY STICK PRO DUO



Q4035 512MB

\$89

T6228 1GB

\$140

SONY INTERNAL DUAL LAYER 16X DVD BURNER



DRU810A

- Internal, easy to install EIDE/ATAPI Interface
- Replaceable black front faceplate included

T3331

\$109

SONY EXTERNAL DUAL LAYER 16X DVD BURNER



DRX810UL

- USB2.0 and i.LINK / Firewire connection
- Can be operated in a vertical or horizontal orientation

T3332

\$235

*RENTSMART

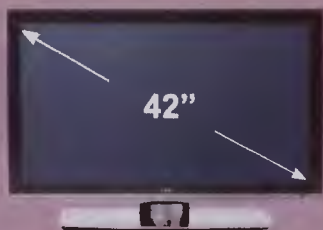
The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

LEADERS IN VISUAL DISPLAY TECHNOLOGY

42" PLASMA DISPLAY



(Stand not included)

THE DIFFERENCE IS CLEAR

NEC's (SD, HD) Plasma range is designed to complement, not dominate, any corporate or living space. The new range incorporates all the best Plasma technology currently available from its stunning 68.7 billion colour reproduction, to an increase in brightness and contrast.

The 42" (42-XR4W) Plasma also offers the lowest power consumption of any Plasma currently on the market plus an incredible range of data and video inputs, including dual HDMI. The new swivel stand and attractive speakers add to what is already the ultimate home theatre product.

T4163 BLACK **Rent* \$39.57/wk**
\$3,799

OPTIONAL EXTRAS:

T4182 **\$399**
Stand - Silver

T4183 **\$419**
Twin Speakers - 9w Silver

T4184 **\$419**
Twin Speakers - 9w Black

T4185 **\$399**
HD Set Top Box

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

19" ANALOGUE LCD MONITOR



ACCUSYNC LCD92V

- Native resolution: 1280 x 1024
- Contrast ratio: 450:1
- Response time: 8ms
- Easy detachable base
- XtraView wide-angle viewing
- Thin frame design
- Warranty: 3 years limited warranty on parts and labour

Q5545 White **\$469**Q5546 Black **\$469**

19" ANALOGUE/DIGITAL LCD MONITOR



MULTISYNC LCD1980FXI

- Native resolution: 1280 x 1024
- Contrast ratio: 600:1
- Dual digital inputs: (DVI-I/DVI-D)
- Height adjustable stand
- XtraView wide-angle viewing
- Ultra thin bezel design
- Warranty: 3 years limited warranty on parts and labour

Rent* \$11.30/wk

S7448 White **\$1,009**S7437 Black **\$1,009**

19" ANALOGUE/DIGITAL LCD MONITOR



MULTISYNC LCD1990GX2

- Native resolution: 1280 x 1024
- Contrast ratio: 700:1
- Response time: 4ms
- OptiClear screen technology
- Cable management system
- Tilt & swivel adjust for viewing comfort
- Warranty: 3 years limited warranty on parts and labour

Rent* \$10.07/wk

T6791 **\$899**

SVGA PORTABLE LCD PROJECTOR



VT-48G

- 1600 ANSI Lumens
- SVGA resolution
- Contrast ratio: 600:1
- Lamp life 3000 hours
- Multiple input terminals
- Integrated speaker
- Wall colour correction
- Compact 2.8kg
- Warranty: 2 years on parts

Rent* \$11.19/wk

T3233 **\$999**

SVGA PORTABLE LCD PROJECTOR



VT-480G

- 2000 ANSI Lumens
- SVGA resolution
- Contrast ratio: 600:1
- Lamp life 2000 hours
- Multiple input terminals
- Integrated speaker
- Security function
- Compact 2.9kg
- Warranty: 2 years on parts

Rent* \$16.35/wk

T3738 **\$1,459**

XGA PORTABLE DLP PROJECTOR



LT-25G

- 2200 ANSI Lumens
- XGA resolution
- Contrast ratio: 1500:1
- Lamp life 2000 hours
- Integrated speaker
- Auto focus function
- Direct power off function
- Ultra Compact 2.0kg
- Warranty: 2 years on parts

Rent* \$24.64/wk

T4004 **\$2,199**

These products are for delivery only. Delivery charges apply. See page 63 for details.



Authorised Solutions Reseller

harristechnology



Accessories

SET YOUR MUSIC IN MOTION

APPLE IPOD VIDEO

First, iPod put music in your pocket. Now it puts on a show. With support for up to 15,000 songs and up to 150 hours of video on a 2.5" QVGA colour display, iPod gives you the ultimate music experience — sight and sound — in a lighter, thinner design. Available in classic white and dramatic black.

- Holds up to 15,000 songs¹ and full-colour album art
- Bright 2.5", 320 x 240 pixel TFT display
- Up to 20 hours of battery life⁴
- Holds up to 25,000 photos²
- Holds up to 150 hours of video³
- Apple click wheel
- Accessory-compatible dock connector
- Dock works with the new Apple remote
- Syncs contacts, calendars and to-do lists
- For Mac and Windows

¹ Song capacity is based on four minutes per song and 128Kbps AAC encoding.

² Photo capacity is based on iPod-viewable photos transferred from iTunes.

³ Video capacity is based on 4 minutes per H.264 750Kbps video combined with 128Kbps audio.

⁴ Up to 20 hours of battery life refers to 60GB model and music playback. Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Battery life and number of charge cycles vary by use and settings. See www.apple.com.au/batteries for more information.



Rent* \$6.70/wk

T1569 30GB WHITE **\$449**

T1577 60GB WHITE **\$598**

Rent* \$6.70/wk

T1576 30GB BLACK **\$449**

T1578 60GB BLACK **\$598**

APPLE IPOD NANO

- Up to 1,000 songs⁶ or 25,000 photos⁷
- Just 0.27 inches thin and 1.5 ounces
- Vivid, backlit color display
- Up to 14 hours of battery life⁵
- For Mac and Windows

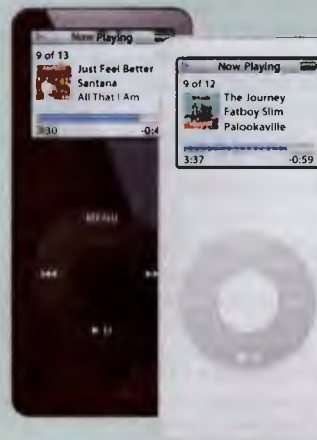
⁵ Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Battery life and number of charge cycles vary by use and settings.

See www.apple.com/batteries for more information.

⁶ Music capacity is based on 4 minutes per song and 128Kbps AAC encoding. 1,000 song capacity refers to 4GB Nano model.

1GB = 1 billion bytes; actual formatted capacity less.

⁷ Photo capacity is based on iPodviewable photos transferred from iTunes.



T5713 1GB WHITE **\$219**

T5714 1GB BLACK **\$219**

S9613 2GB WHITE **\$299**

S9616 4GB WHITE **\$359**

S9614 2GB BLACK **\$299**

S9615 4GB BLACK **\$359**

ITUNES MUSIC CARDS



Give an iTunes Music Card to the music lovers in your life and let them re-discover old favourites or keep up with the hottest hits. With the prepaid card, they can purchase songs from the #1 music download store and listen to them anywhere with iPod or on their computers with iTunes for Mac or Windows.

To redeem iTunes prepaid cards:

- Download iTunes for Mac or Windows at www.itunes.com
- Open iTunes and click Music Store
- Click Prepaid Cards
- Enter the code printed on the attached card when requested
- Download your songs. Enjoy!

T0782 \$20 CREDIT **\$20**

T0783 \$50 CREDIT **\$50**

T0784 \$100 CREDIT **\$100**

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



FOR BUSINESSES ON THE MOVE

REVOLUTIONISE THE WAY
YOU MANAGE YOUR LIFE WITH
LIFEDRIVE



BONUS
LOGITECH
WIRELESS
HEADPHONES!



LifeDrive™

Palm introduces the LifeDrive Mobile Manager. With 3.8GB of storage and built in Wi-Fi & Bluetooth support, you can easily carry files from your desktop computer; 300 songs, 2.5 hours of video¹, vacation photos, and more. Includes support for POP, IMAP and Exchange email accounts, plus onboard voice recorder, MP3 player, and photo viewer.

- 4GB hard drive
- LifeDrive smart file management
- Wi-Fi (802.11b) and Bluetooth v1.1
- 320 x 480 hi-resolution, colour display
- Supports native Word, Excel, and PowerPoint files
- Supports secure wireless email access with attachments
- Built-in Microsoft Exchange ActiveSync²

*Requires Microsoft Exchange Server 2003

Rent* \$7.72/wk

S1814

\$689

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

STAY CONNECTED WITH PALM TREO 650

The Treo 650 smartphone from Palm makes it easier than ever to stay connected. It simplifies your life by combining a compact mobile phone with email, an organiser, messaging and web access. There's also Bluetooth technology so you can connect wirelessly to other Bluetooth devices, a built-in MP3 player, a digital camera that captures video, and a vibrant colour screen that brings everything to life. And it supports GSM EDGE networks, a worldwide standard for high-speed wireless data communications.

PALM TREO 650 COLOUR SMARTPHONE

- Processor: Intel XScale 312MHz
- Main Memory: 22MB user accessible RAM
- Display: 320 x 320 TFT touch screen
- Audio: Built In (stereo adaptor sold separately)
- Camera: VGA (640x480) w/ 2x Zoom
- Input Device: Stylus, 5 way navigation button, QWERTY keyboard
- Expansion: SD/MMCard Slot with SDIO
- Communication: GSM/GPRS/EDGE 850/900/1800/1900 World Phone, Infrared, USB cable, Bluetooth



Bluetooth

R3503



BONUS
LOGITECH
WIRELESS
HEADPHONE!

Rent* \$10.07/wk

\$899

AFFORDABLE WI-FI IS HERE WITH PALM TX HANDHELD

With built in Wi-Fi and Bluetooth[®] technology, the Palm[®] TX handheld is the wireless device you've been waiting for. Browse the web, check email², and see everything on a large colour screen. Work on your Word, Excel, and PowerPoint files³ - or have some fun and listen to MP3s⁴. It's anything but business as usual.

PALM TX HANDHELD

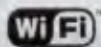
- Built-in Wi-Fi and Bluetooth wireless technology
- High resolution 320 x 480 screen, rotates to landscape or portrait
- 128MB¹ flash memory keeps your information safe
- Browse the web and send email²
- View photos and videos, play MP3 files and podcasts³
- View, edit, and create Word, Excel and PowerPoint compatible files³
- MultiMediaCard, SD, and SDIO expansion card compatible
- Intel 312MHz processor

¹ 100MB actual storage capacity.

² Within wireless service coverage area only. Bluetooth functionality requires compatible Bluetooth device; web and email require data plan and an ISP, all sold separately. Some Wi-Fi hotspots require fee for usage. Microsoft Exchange Server 2003 or VPN may be required.

³ PowerPoint support for Macintosh is view only.

⁴ Expansion card required for Macintosh, sold separately. Internet download may be required.



T0850



BONUS
LOGITECH
WIRELESS
HEADPHONE!

\$499

¹ Purchase a Palm LifeDrive, TX or Treo between 8/04/06 and 31/05/06 and receive bonus Logitech Wireless Headphones. Via redemption from Palm. For more details visit www.palm.com/au.

DESIGNED TO MOVE YOU

V270 CORDLESS NOTEBOOK MOUSE WITH BLUETOOTH



The Logitech V270 Cordless Optical Notebook Mouse for Bluetooth works without a receiver for the ultimate in hassle-free mobility. Connects instantly to your Bluetooth-enabled notebook, providing up to 30 feet of cordless range. Power-saving modes, battery indicator light, and an on/off switch manage power wisely. Incredibly smooth tracking for maximum productivity while traveling.

T3577

\$74

V400 LASER CORDLESS MOUSE FOR NOTEBOOKS



The Logitech V400 Laser Cordless Mouse for Notebooks offers boundless mobility with an All-Terrain Laser™ sensor that tracks on even more surfaces. 2.4GHz Digital Cordless gives you a 5x stronger cordless connection, with no interference. Tilt Wheel Plus Zoom and programmable forward/backward buttons provide unprecedented control. A shock-resistant design and rubber side grips make the V400 ready for the road. USB.

T6436

\$89

QUICKCAM FOR NOTEBOOKS



Portable and easy to use, Logitech QuickCam for Notebooks is a great way to stay connected at home or on the go. VGA-quality video, integrated microphone and snapshots up to 1.3 megapixels (interpolated) make this camera a versatile performer. The compact design and included travel case allow you to take it anywhere.

S6907

\$65

QUICKCAM FOR NOTEBOOKS PRO



Enjoy natural video conversations from your laptop. QuickCam for Notebook Pro's groundbreaking design and performance-enhancing technologies create an experience like never before. True 1.3 MP sensor with RightLight™ technology provides sharp images even in dim light. RightSound™ ensures clear, echo-free audio with or without a headset. A low-position lens gives improved eye-to-eye contact.

T5700

\$175

V-20 NOTEBOOK SPEAKERS



Finally, get great audio from your laptop with the Logitech V20 Notebook Speakers. The USB port provides power and digital quality audio - no other cables necessary. Innovative dynamic headroom technology and an active/pressure driver combination maximise bass response in a lightweight, portable design. Travel case included.

S8957

\$119

2.4 GHZ CORDLESS PRESENTER



The Logitech Cordless 2.4 GHz Presenter helps you effectively manage your time during presentations with a built-in, programmable LCD timer, and offers trusted cordless performance within a 15 metre (50-foot) range. No software is required, just plug it in and it works. Mini-receiver stores inside device. Carrying case is included.

S8331

\$123

CORDLESS DESKTOP EX-110



Enjoy the freedom and precision of an 800-dpi optical mouse, plus one-touch controls that make music, Internet, and other frequent functions simpler. Superb quality and value.

S8949

\$65

CORDLESS DESKTOP S-510



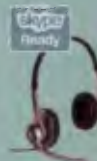
Integrated one-touch media and Internet controls include a music "Shuffle" key, instant image rotate and zooming. An advanced optical mouse with tilt wheel delivers fast performance-and freedom of movement.

S8911

\$99

STEREO USB HEADSET 250

Chat in comfort with Logitech's Stereo USB Headset 250. Its noise canceling microphone improves microphone performance, while the leatherette ear pads and adjustable headband enhance comfort.



R7933

\$68

STEREO USB HEADSET 350

Chat in comfort with Logitech's Premium USB Headset 350. This convenient headset features soft touch in-line volume and mute controls. The plush ear pads and premium headband enhance comfort.



R7934

\$75

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

DELIVERY ONLY

These products are for delivery only. Delivery charges apply. See page 63 for details.



Targus

GET MOBILE...GET TARGUS

LEATHER CASE AND PRESENTER



Includes:

- 15.4" leather case
- Silver wireless presenter

20376

\$169

NOTEBOOK ESSENTIALS BUNDLE



Includes:

- Includes 15.4" notebook case
- Wired mini optical mouse
- 4 port mini USB 2.0 hub

40272

\$79

LIFESTYLE MESSENGER BUNDLE



Includes:

- Vibe 15.4" messenger case
- Retractable mouse
- USB 2.0 4 port hub
- **BONUS** 128MB Flash Drive - while stocks last

A5088

\$119

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

LADIES GETTA TOTE



89488

\$109

LADIES KOSKIN CASE



R5334

\$110



\$10 from the sale of these ladies cases will be donated by Targus to the National Breast Cancer Foundation

These ladies cases feature:

- Dedicated section for your notebook - fits up to 15.4" screens
- Removable cosmetics / accessory pouch
- Mobile phone compartment, card and pen holders and key clip

Targus laser mice have up to 20 times more tracking sensitivity than typical optical mice, for greater accuracy on shiny surfaces - ideal for gamers and designers

DESKTOP WIRELESS LASER MOUSE



- Recharge via the USB charge cable
- RF wireless technology
- Convenient extension port
- Efficient pre-programmed buttons

A6108

\$65

DESKTOP WIRED LASER MOUSE



- Comfortable full size ergonomic design
- Efficient pre-programmed buttons

A6109

\$55

NOTEBOOK RETRACTABLE LASER MOUSE



- Retractable cable management system
- USB connection for hot swap capability
- Notebook wireless laser mouse also available

A6112

\$53

ROGUE BACKPACK



- Fits up to 15.4" notebooks
- Large padded side pockets
- CD or MP3 player pocket with headphone port hole

23952

\$89

REPEL BACKPACK



- Fits up to 15.4" notebooks
- Reflective accents for night visibility
- Ergonomic shoulder strap & lumbar support

33033

\$115

URBAN BACKPACK



- Removable slip case for 15.4" notebooks
- Contoured shoulder straps
- Easy access compartment for an iPod or MP3 player

68732

\$115



These products are for delivery only. Delivery charges apply. See page 63 for details

MICROSOFT HARDWARE

OPTICAL DESKTOP ELITE FOR BLUETOOTH



- Top performance, advanced technology and ergonomic comfort
- Wireless Freedom - no tangled cords and clutter!
- Wireless optical mouse with tilt wheel gives you worry free accuracy
- Connect your computer to a host of Bluetooth devices
- New optical technology helps extends battery life

P7009

\$259

WIRELESS LASER DESKTOP 6000



- Wireless Freedom - no cords or recharging station!
- High Definition Wireless mouse with 4 way scrolling for laser-smooth precision
- Comfort curve design keyboard
- Get a closer look - zoom in quickly and accurately with the intuitive zoom slider

T0468

\$199

COMFORT OPTICAL MOUSE 3000



- Scroll through documents and web pages quicker and easier with this ergonomic, 4 button mouse
- High Definition Optical Technology
- Magnifier - point and click to enlarge and edit
- Tilt Wheel Technology for 4 way scrolling
- 4 programmable buttons
- Comfort designed for either hand

T0613

\$35

WIRELESS NOTEBOOK LASER MOUSE 6000



- Accuracy and control of advanced laser technology
- Easily enlarge and edit details with the new magnifier
- 4 way scrolling for greater efficiency and comfort
- Plug in the snap-in receiver when you're ready to work, then snap it into your mouse when you travel, preserving battery life

T0467

\$99

NATURAL ERGONOMIC KEYBOARD 4000



- Advanced ergonomic design
- More direct key strikes for less finger effort with the gull-wing design
- Reverse slope optional palm lift
- Get a closer look - zoom in quickly and accurately with the intuitive zoom slider

T0577

\$79

COMFORT CURVE KEYBOARD 2000



- Ultra-thin profile keys
- Comfort curve keyboard layout
- Internet access with the touch of a button
- Easy set-up and use - just plug it in and start typing
- MultiMedia keys
- Spill-resistant design

T0464

\$39

WIRELESS INTELLIMOUSE EXPLORER FOR BLUETOOTH (USB)



- Tilt wheel technology
- Microsoft optical technology delivers superior tracking with precision accuracy
- Features 2 extra side buttons that let you move forward and back in your Internet browser

P7006

\$129

WIRELESS OPTICAL MOUSE 3000



- Scroll horizontally as well as vertically through documents and web pages
- Longer battery life
- Ergonomic designed comfort for either hand
- 3 programmable buttons for your convenience

K8218

\$69

WIRELESS OPTICAL MOUSE 5000



- High definition optical technology
- Tilt wheel technology
- Ergonomic design
- 5 programmable buttons
- Longer battery life

S9536

\$69

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

SEAGATE EXTERNAL HARD DRIVES

SEAGATE COMPACT FLASH PHOTO HARD DRIVE



These high-capacity Compact Flash photo hard drives are the perfect storage solution for professional and enthusiast photographers. Available in 4GB and 8GB capacities, you can quickly store thousands of high-resolution photos without changing the card. With their rugged design and world-renowned Seagate quality, you can count on data integrity and protection from drops and falls.

- Ultra-fast 3600-RPM drives with 2MB cache
- Built to last, inside and out, so the drive and data are protected
- Compatible with a wide and growing range of CF Type II, digital cameras
- 3600 RPM drives with 2MB cache consistently deliver the high performance you need
- Worry-free, 1 year warranty covers all parts and labour

T3725	4GB	\$249
T3726	8GB	\$449

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

PUSHBUTTON BACKUP EXTERNAL HARD DRIVE 3.5" 7200RPM FIREWIRE/USB 2.0

HIGH CAPACITY, AMAZING PERFORMANCE

These high-capacity drives make it easy to store and back-up your business files, movies and photos, the latest games, your favorite music and more. And the interlocking design lets you securely expand your Seagate storage.

ENGINEERED FOR HIGH PERFORMANCE

These 7200 RPM drives with whisper quiet motor lets you effortlessly store and work with massive amounts of data.

BUILT FOR SAFETY AND SECURITY

Seagate hard drives are safeguarded by built-in self monitoring technology that continuously checks your hard drive for data safety and drive performance. SeaTools diagnostic software is included.

WORRY FREE, 1 YEAR WARRANTY

Warranty covers all parts and labour.

R3677 200GB (USB 2.0+FireWire)

\$309

T6581 300GB (USB 2.0+FireWire)

\$379

R3679 400GB (USB 2.0+FireWire)

\$509

PORTABLE DRIVE 2.5" EXTERNAL 5400 RPM USB 2.0



Perfect for the extreme traveler, these drives are exceptionally durable with a robust, rugged aluminum design, ensuring reliable performance wherever your work takes you. Never worry about data corruption due to overheating. They're specially designed, inside and out, to run much cooler than other hard drives.

- 2MB cache (40GB) / 8MB cache (100GB)
- 5400 RPM
- 5000 Gs non-operating shock resistance
- Mac and PC compatible
- Worry-free, 1 year warranty covers all parts and labour
- 100GB bundled with Award winning BounceBack Express back-up software

R3680 40GB

\$215

R3682 100GB

\$349

EXTERNAL HARD DRIVE 3.5" 7200 RPM USB 2.0



Protect your valuable data and digital memories for years to come! These easy to use external drives are a safe and affordable way to protect everything from business files to your treasured digital memories.

- Easy storage and access for large digital music, photo, video, personal data and multimedia files
- Large-capacity drives extend the life of your computer by providing extra storage space
- Fast 7200-RPM high-performance drives let you effortlessly handle large amounts of data
- These technically advanced drives feature whisper-quiet operation and external vents to ensure they don't get hot
- 1 year warranty covers all parts and labor
- Free technical support even after the warranty ends

T6057 120GB

\$179

STORE YOUR WORLD IN OURS

CRUZER PROFILE USB FLASH DRIVE

What value do you place on your data?

Today anyone can access information from standard USB keys but with built-in biometric security, the Cruiser Profile delivers the ultimate in portable data security. This highly-secure product stores all your data and passwords, accessible only with the swipe of your fingerprint. Just plug in the drive, swipe your finger, and you can log-on to any of your stored protected areas in a snap with the exclusive CruiserPass™ password bank. You can use any host PC with your Cruiser Profile without having to install any cumbersome software or leave any trace on that PC.



T2401 512MB

\$79

T2402 1GB

\$129

ULTRA II SECURE DIGITAL PLUS CARDS

The newest addition to the ultra family is the innovative SanDisk Ultra II SD Plus. This ground breaking card gives you the capacity to connect your SD card directly into a USB port by transforming into a USB adapter, via our unique hinged cover, eliminating the need for any readers to offload content to a PC.

FEATURES:

- Minimum of 10MB/second sequential read speed for ultra-fast image viewing and data transfer
- Minimum 9MB/second sequential write speed lets you capture large image files faster
- Backed by a lifetime limited warranty
- Low power consumption for longer battery life



**WITH USB
CONNECTOR**

R9400 512MB

\$72

R9401 1GB

\$125

SANDISK CRUZER TITANIUM USB FLASH DRIVE



Built with a space-age Liquidmetal® metal casing and virtually indestructible, the Cruiser Titanium sleek design is so rugged it has been tested to be crush-resistant to over 2,000 pounds of force** – over two and a half times the strength of titanium alloy. With USB 2.0 connectivity (USB 1.1 compatible, too), it's so fast you'll transfer files in a flash. And you'll know when it's working because the cool blue LED is blinking. When protecting your most critical pictures, videos, music and data really matters, Cruiser Titanium is the drive for you.

FEATURES:

- Retractable USB connector
- 9MB/second write and >15MB/s read speeds
- Laser etched graphics and finish
- Compatible with Windows/MAC
- Dimensions: 8.5mm x 20.8mm x 74.8mm (H x W x L)

N9454 512MB

\$70

S2291 1GB

\$122

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



STORAGE SOLUTIONS

EXTERNAL DL LIGHTSCRIBE DVD BURNER



Create your own fabulous custom designs with crisp text, graphics and photos, which you can add to again and again.

- Easily burns professional labels
- Convenient - no need for a printer
- Professional quality laser precision and detail

LaCie DL + LightScribe
16x DVD±RW - USB 2.0

T3116 **\$179**

LaCie d2 DL SuperDrive
LightScribe 16x DVD±RW - USB
2.0 + Firewire
(Includes PC/Mac software)

T3124 **\$229**

LACIE FIREWIRE 800 PCI CARD
(3 PORTS)



J6551 **\$129**

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

GIGABIT ETHERNET DISK



- Gigabit Ethernet NAS + 4 USB2.0 ports
- Premiere Microsoft Windows XP Embedded
- ExtremeZ-IP File Server support for Apple Mac OS9/OSX
- Share data among 25 users. Connect up to 500 users
- Backup function with scheduler
- Auto-sensing 10/100/1000 base-T, TCP/IP, SMB/CIFS, AppleTalk, FTP, HTTP, DHCP

Rent* \$19.04/wk

S8196 1000GB **\$1,699**

Rent* \$29.45/wk

T0500 2000GB **\$2,799**

d2 EXTERNAL HARD DISK DRIVES



LaCie d2 drives have been designed for professional users in mind. Robust, lightweight, fast cooling and noise free, these drives have unique features such as Kensington cable lock slot, autoswitch power on/off with your computer and are rackmountable in 19" rack.

USB/FIREWIRE/FW800

S9086 250GB d2 Extreme **\$379**

USB ONLY

T3460 500GB d2 BigDisk **\$499**

Raid-0 USB/FIREWIRE/FW800

Rent* \$13.43/wk

T6655 1TB d2 BigDisk Extreme **\$1,199**

USB/FIREWIRE/FW800

Rent* \$24.99/wk

S9088 2TB d2 BiggerDisk Extreme **\$2,339**

Porsche EXTERNAL USB 2.0 & FIREWIRE MOBILE DRIVES



NB: The key is not included

- Ultra-lightweight, only 200g
- AC adapter free
- BUS powered via USB 2.0 or Firewire

S2458 40GB

\$225

S1929 80GB

\$299

LACIE CARTE ORANGE 8GB USB 2.0 KEY



Imagine how fun it will be to carry your photo album, MP3 library, and mini-camcorder in a device the size of a credit card for sharing with friends and colleagues whenever you want to. The LaCie Carte Orange is extremely convenient to carry thanks to its rugged design and compact credit card sized shape.

Features:

- Credit card-sized USB key with 8GB capacity
- Compact, rugged metal design
- True plug and play convenience
- Integrated Hi-Speed USB 2.0 cable
- No need for power supply or adapter
- No need for power-sharing cable
- Driver-free for Windows 2000/XP and Mac OS X
- Ultra-thin 6mm (0.23") width

T3091

\$199



These products are for delivery only. Delivery charges apply. See page 63 for details.

BELKIN ACCESSORIES

NOTEBOOK MOBILITY BUNDLE



**NOW
WITH
OPTICAL
MOUSE**

- Notebook bag suitable for notebooks up to 15.4"
- Super soft shoulder strap
- Optical miniscroller mouse
- 4 port USB hub

T0583

\$69

FREEPORT II NOTEBOOK BACKPACK TROLLEY



- Versatility Plus! Use as a trolley bag or a backpack
- Removeable padded notebook sleeve
- Includes 2 removeable cases for MP3 player, PDA or mobile phone

L4276

\$99

7-IN-1 RETRACTABLE CABLE KIT



- Everything you need to connect to USB devices, modems or networks
- Includes all types of USB connections, RJ11 telephone and RJ45 patch and crossover capability
- Retractable cable design for convenient storage in custom carry case

T4136

\$49

WIRELESS CALCULATOR / NUMERIC KEYPAD AND MOUSE BUNDLE



- Calculator and keypad ideal for data entry on the move
- Hi precision mouse for perfect navigation
- Shares a single wireless receiver that snap locks on to keypad for convenient storage
- Full multimedia control from keypad

T4432

\$99

MINI USB GLO MOUSE WITH RETRACTABLE CORD



- Delivers the Plug-and-Play convenience of USB
- Flexible, left or right handed functionality
- Radiates attractive colour changing lights
- Comes with a Belkin Lifetime Warranty

R9475

\$33

2 PORT USB KVM SWITCH WITH AUDIO SUPPORT



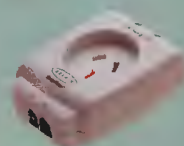
- Control 2 computers (notebook or PC) with one keyboard, monitor and mouse. Regain valuable desktop space and use your preferred monitor and keyboard / mouse devices with both computers
- Installs easily
 - 2m cables included - PS/2 available
 - Allows you to also share one set of speakers with both computers

N8931

\$85

HOME SERIES SURGE CUBE WITH TEL + \$55,000 WARRANTY

F9H110VauCW



N3356

\$31

HOME SERIES 4-WAY (2M CORD) + TEL + \$75,000 WARRANTY

F9H410au2M



N3361

\$54

GOLD SERIES 7-WAY (3M CORD) + TEL + AV + RJ45 + \$UNLIMITED WARRANTY

F9G726au3M-GRY



N3351

\$148

SOHO SERIES UPS SERIAL & USB 650VA - \$100,000 WARRANTY

F6H650auUNV



M0848

\$249

UNIVERSAL SERIES UPS SERIAL & USB WITH AVR - 800 VA - \$150,000 WARRANTY

F6C800auUNV



H9169

\$333

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

 These products are for delivery only. Delivery charges apply. See page 63 for details.

PROTECT YOUR STORAGE

**MAXTOR ONETOUCH
II™ FIREWIRE 800
EDITION
FOR CREATIVE
PROFESSIONALS**


Tap into the speed of FireWire 800 for fast access to your files, while also having the versatility of FireWire 400 and USB 2.0 interfaces to easily transfer or share data with plug and play convenience. Designed with the creative professional in mind, the high speed, high capacity FireWire 800 Edition comes preformatted for Mac and has the ability to boot the Mac operating system directly from the FireWire 800 drive. The 7200 RPM hard drive with up to 16MB cache comes equipped with award-winning Maxtor OneTouch backup features and Maxtor DriveLock™ for added security.

Mac and PC compatible.

T5885	200GB		\$299
T5886	300GB		\$399
T5890	500GB		\$599

***RENTSMART**

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

**MAXTOR ONETOUCH III 2.5" MINI
EDITION**


Portable storage with software for simple backup, sync and security

A portable, feature-rich yet easy to use backup and storage hard drive that fits in the palm of your hand.

- Weighs less than 8 ounces
- USB bus-powered—no additional power cords needed
- Two levels of security with Maxtor DriveLock and Encryption to safeguard against unauthorised use
- System Rollback—rolls back your PC settings to a better point in time while keeping data current
- Simple Maxtor user-interface for drive management, security and automated backup scheduling
- Rubber non-slip side grips

T6327	60GB	\$199
T6328	100GB	\$299

MAXTOR ONE TOUCH III

Maxtor OneTouch button - the easy way to make backup copies of your files

Simple backup and storage with Maxtor DriveLock™ to protect the contents of your drive in case of loss or unauthorised use. With up to 500GB, there's ample room to store your videos, photos, graphics, music and more in one convenient location.

- Creates historical backup versions with full system and file restore to a point in time
- Data Synchronization between 2 or more computers
- Soft-touch overmold enables stable grip for transport
- Dual interface: FireWire compatible & USB 2.0 and 1.1 compatible
- Plug and play storage
- Power on/off button and power management utilities included

T5880	100GB	\$229
T5719	200GB	\$289



These products are for delivery only. Delivery charges apply. See page 63 for details

**MAXTOR ONE TOUCH™ III, TURBO
EDITION**


The Maxtor OneTouch Turbo solution designed for creative professionals. The Turbo Edition RAID solution brings high performance throughput for high quality video editing without dropping frames or automatic mirroring as an additional safeguard. Its new design brings a "soft touch" to the hardware world with a design that includes an innovative exterior finish that not only feels good to touch but provides additional shock and vibration protection for your valuable files inside.

- User-configurable RAID solution. Use RAID 0 for high performance disk striping or RAID 1 for automatic mirroring
- FireWire 800 for fast data transfer
- Maxtor DriveLock™ protects contents of drive in case of loss or unauthorised use
- Simple Maxtor user-interface for drive management, security and backup scheduling

T4612	600GB (RAID 0 only)	\$789
T4613	1TB (RAID 0/1)	\$1,199



T5718	300GB	\$389
T5881	500GB	\$589

SHARE YOUR STORAGE

MAXTOR SHARED STORAGE PLUS

NOW WITH SCHEDULED BACK UPS & MEDIA STREAMING

The Maxtor Shared Storage™ Plus solution lets you easily centralise, organise, back up and share family photos, music and data on a home or small office network. Installation is simple - just plug it into your router via Ethernet and the automatic configuration seamlessly integrates into small office and home TCP/IP-based networks.

FEATURES:

- 2 USB ports let you add shared network printers or external storage
- Access files from multiple PCs simultaneously
- You can set access privileges and keep selected folders private
- With Maxtor exclusive Drag and Sort™ technology, you can instantly organise files by dragging them from your desktop PC to the Maxtor Shared Storage Drive
- SimpleView™ provides quick backup and storage status
- Plays back digital photos, music and video to networked home entertainment system¹
- 1 year warranty

¹Media streaming requires UPnP certified Digital Media Adapter (DMA)



R7907 200GB

\$389

Rent* \$7.49/wk

Q1270 300GB

\$485

T4611 500GB

\$669

EXPAND YOUR STORAGE

MAXTOR BASICS 3200 EXTERNAL USB 2.0

INSTANT STORAGE FOR YOUR DIGITAL LIFE

Instantly expand your storage to hold digital photos, music, and data files. It's simple to install—just plug the external drive into an available USB port on your PC. We even include a vertical stand to help keep your desktop clutter-free! Compatible with the fast USB 2.0 interface and USB 1.1. Improve the functionality of your computer by moving your files over to the Maxtor Personal Storage 3200.

THE PERSONAL STORAGE 3200 SOLUTION IS IDEAL WHEN:

- You need simple, reliable add-on storage
- You need to easily handle your expanding collection of digital photos, mp3 audio files and documents
- You need a worry-free storage solution for your personal and work files

FEATURES

- Easy add-on storage for home or office
- Easy installation
- Perfect for digital photos, music, and data files
- Compact design includes stand for vertical orientation
- USB 2.0 and 1.1 compatibility
- Up to 480Mb/sec data transfer rate
- Up to 300GB capacities
- PC compatible



T5755 100GB

\$149

T5757 200GB

\$199

T5758 300GB

\$287

AND THE AWARD GOES TO.... MAXTOR!!



CES 2006 INNOVATIONS DESIGN AND ENGINEERING HONOREE

CES - January 2006

Maxtor OneTouch III, with triple interface

A preeminent panel of judges evaluated entries based on four weighted criteria: User value, Aesthetics, Contributions to the quality of life and Innovative design and qualities.



MAXTOR SHARED STORAGE WINS 2006 PC WORLD INNOVATIONS AWARD

PC World - January 2006

Maxtor Shared Storage Plus

The 2006 PC World Innovations Award honors trend-setting products that have emerged with the convergence of PC Technology and consumer electronics.

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



SMART SWITCHES

PROSAFE 802.11G WIRELESS VPN FIREWALL 8



FVG318

- Integrated 802.11g wireless access point with speeds up to 108Mbps
- 8 port 10/100 switch
- Advanced security with Stateful Packet Inspection (SPI) firewall, 8 VPN tunnels, WPA2 for WLAN security
- Smart Wizard connects to your ISP quickly and easily
- VPN Wizard effortlessly sets up VPN tunnel configuration

T2399

\$240

PROSAFE VPN FIREWALL 25



FVS124G

- 2 x 10/100 WAN interfaces provide load balancing or failover protection
- 4 x auto-sensing Gigabit LAN switch ports provide high-speed links for servers and PCs
- Up to 25 3DES or AES VPN tunnels using Public Key Infrastructure (PKI)
- Advanced Security and SNMP Management—Advanced Stateful Packet Inspection (SPI) Firewall
- Bundled with ProSafe VPN Client Software single user license

S7022

\$358

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

Why NETGEAR Smart Switches?

If you want to add key management features without the complexity of fully managed systems at cost of unmanaged, Smart Switches are an ideal way to add basic management to unmanaged networks. Install Smart Switches anywhere you would use an unmanaged switch and you have a perfect safety net, providing growth, protection and control without the cost or overhead of a full Layer 2 or Layer 3 management implementation. Use a Smart Switch where a fully managed network is already deployed and you are able to extend the management capabilities and improve overall network performance and responsiveness, all while staying within budget.

Introducing the new Stackable Smart Switches from NETGEAR. The latest products in the Smart Switch Range!



24 PORT STACKABLE SMART SWITCH

FS728TS

- 24 10/100Mbps ports
- Stacking via the built-in gigabit ports
- Smart Switch software with new advanced features
- 4 Gigabit ports

Rent* \$7.05/wk

T4681

\$629



48 PORT STACKABLE SMART SWITCH WITH POE

FS752TPS

- 48 10/100 Mbps ports
- 4 10/100/1000 Mbps copper gigabit ports
- 2 Small Form-factor Pluggable (SFP) GBIC slots
- 24 ports of POE

Rent* \$17.69/wk

T6561

\$1,579

GO GIGABIT

GIGABIT PCI ETHERNET ADAPTER

GA311

- 10/100/1000Mbps performance
- Smart Wizard install assistant for quick setup
- Supports all major operating systems

M2693

\$29

GIGABIT PC CARD



GA511

- 10/100/1000Mbps performance
- Smart Wizard install assistant for quick setup
- Supports all major operating systems

Q2474

\$78

PROSAFE 10/100 SMART SWITCH WITH 2 GIGABIT PORTS



FS726T

- 24 10/100 ports Mbps
- 2 gigabit ports for high speed connections
- One SFP GBIC slot for optional fiber connectivity
- Smart Switch software enables Trunking, VLANs, and traffic prioritisation

R0482

\$479

24 PORT GIGABIT SMART SWITCH



GS724T

- 24 non-blocking 10/100/1000 Mbps ports
- 2 SFP GBIC slots for fiber connectivity options
- Smart Management features for trunking, VLANs, and traffic prioritisation

Rent* \$9.40/wk

N3147

\$839



These products are for delivery only. Delivery charges apply. See page 63 for details.



NETGEAR™

harristechnology

Networking

NETGEAR MAKES STORAGE EASY



You could be enjoying over \$5,000 worth of fantastic digital entertainment equipment simply by purchasing a NETGEAR product during the months of May and June 2006.

See <http://www.netgear.com.au/digitalhome> for details.



WIRELESS G ADSL 2/2+ 54Mbps MODEM ROUTER

L2609 DG834G **\$173**



ADSL 2/2+ USB/ETHERNET MODEM ROUTER

N6517 DG632 **\$69**



STORAGE CENTRAL

- Share files easily with everyone on the network, while keeping your personal files private
- Easy upgradeability through IDE drives¹
- Connect via RJ - 45 Ethernet

¹Hard drives must be purchased separately.

34265 SC101 **\$192**

WGR613V WIRELESS ROUTER WITH VOICE ADAPTER



WGR613VEN

- 3 10/100 Mbps LAN Port
- 54 Mbps Wireless Firewall Router
- Prioritises voice traffic for optimum quality calls (QoS)
- 1 telephone port to connect analogue telephone

T6569 **\$229**

TA612V SMART BROADBAND VOICE ADAPTER WITH ENGIN



TA612VEN

- Turns your Broadband Internet Service into a Telephone
- 2 ports to connect analogue phones and fax machines
- Shares Internet connection via Ethernet ports and Broadband modem
- Prioritises voice traffic for optimum Quality of Service (QoS)
- Free Caller ID, Call Waiting, Voice Mail and 3 way calling
- Local, long distance, and International calls at low prices

S9656 **\$99**

RANGEMAX 240 - FINALLY WIRELESS AT WIRED SPEED!!!

RangeMax 240 is an innovation in wireless technology, delivering wireless speeds of up to 240Mbps - as fast as wired Ethernet. RangeMax 240 uses an advanced MIMO (Multi-In, Multi-Out) technology to transmit multiple streams of data in a single wireless channel.

That means, for the first time ever, you can enjoy wired speeds with wireless freedom. You don't need cables to conveniently stream MP3s or high definition quality video, play online games, access networked storage, use Internet telephony, or just surf the web anywhere in your home. Ultimate speed and coverage make dead spots a thing of the past, even in large homes with thick walls and multiple floors. With RangeMax 240, wireless is finally as fast as wired.



RANGEMAX 240 WIRELESS ROUTER

13689 WPNT834 **\$299**

RANGEMAX 240 WIRELESS NOTEBOOK ADAPTER

08964 WPNT511 **\$199**

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

BROADBAND SOLUTIONS FOR HOME & SMALL BUSINESS

NEW SKYPE/VOIP ACCESSORIES

V25 SKYPE/SOFT PHONE HEADSET



- Stylish and comfortable headset with built-in microphone
- Connects to the speaker and microphone ports on your sound card
- Separate adjustable volume and microphone on/off switch
- Ideal for use with Skype, iChat, MSN and other SIP soft-phone clients

T4123

\$25

NP560 - 200mW WIRELESS BOOSTER



- Add more power to your wireless network for greater range and speed
- Simply connect to any wireless router or access point with a detachable aerial
- Easy installation - no drivers needed
- Uses industry-standard SMA connectors
- Boost your signal up to 9x more than a typical wireless device

T3411

\$199

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

MYNETGATEWAY



NB9W

- All your broadband Internet needs in one device
- Features ADSL2+ modem, 4 port QoS router, 2x FXS (VoIP) ports, 1x FXO line port for landline telephone backup and 11g (54Mbps) Wireless Access Point in one box
- Layer 3 Quality of Service (QoS) router ensures high quality VoIP calls
- Web-based configuration for your choice of broadband and VoIP service providers

T3138

\$249

5 PORT 10/100/1000Mbps SWITCH



NP3005

- 5 port Gigabit switch ideal for fast home networks or small office use
- Use with a Gigabit Network Interface Card and enjoy transfer rates of 2000Mbps (full duplex)
- Backward compatible with 10/100 fast ethernet
- Ideal for graphics, multimedia or applications that move large files across the network

L2659

\$99

DESKTOP VoIP PHONE



V85

- The ideal SOHO/small business workstation VoIP phone
- Built-in PC port can connect the phone and a computer using the one network port
- Full duplex speakerphone, 10 number speed-dial, 50 number phone book
- SIP compatible IP telephone for home and business

35010

\$189

PERFORMAPLUS ADSL2+ MODEM ROUTER



NB8W

- High end modem router for power-hungry small business and home users
- Features ADSL2+ modem, 4 port QoS router, USB port and 11g (54Mbps) wireless
- Active firewall technology for protection against hackers and intruders
- Delivers performance plus for gamers, small business and other power hungry users

T4118

\$239

TURBO HOMEPLUG - ETHERNET OVER POWER



NP285

- A powerful and simple networking solution for homes and small businesses
- Create a local area network or share broadband using your power points - at turbo speeds
- Faster HomePlug standard - up to 85Mbps
- A great way to connect gaming consoles to the Internet or complement a wireless network
- Backward compatible with 14Mbps HomePlug

T3595

\$279

PORTABLE USB VoIP PHONE



LSV40

- The ideal portable VoIP solution for business travellers and notebook users
- Simply connects to the USB port and anywhere with a broadband internet connection
- Comes with connection to MyNetFone VoIP service for out of the box calling
- Includes \$5 credit - 10c unlimited local calls and more..

R8885

\$65

These products are for delivery only. Delivery charges apply. See page 63 for details

INTELLIGENT KVM SOLUTIONS

SERVERLINK LCD KVM RACK DRAWERS

The ServerLink KVM Console drawers are designed for applications where space is at a premium or CRT displays are undesirable. With a 15" or 17" TFT LCD screen, keyboard, touchpad and integrated KVM switch housed in an industry standard 19" 1U-height rack drawer, these LCD KVM switches save you up to 1/3 of valuable rack cabinet space.

- Modular design allows for easy expansion
- "A" Grade 15" or 17" LCD panel with zero dead pixels
- Supports PS/2 PC, USB PC, USB Mac and USB SUN platforms
- Locking mechanism locks the drawer when pulled out and pushed in
- Keyboard and mouse can be hot plugged at any time
- Replaceable keyboard and touch pad
- Standard 19" 1U rack drawer
- Cables sold separately - see below



Model	LKS-101H	LKS-801C	LKS-1601C	LKS-1017H	LKS-8017C	LKS-16017C
No. of Computer Ports	1	8	16	1	8	16
LCD Panel Size	15"	15"	15"	17"	17"	17"
KVM Platform Support	N/A	PS/2 & USB	PS/2 & USB	N/A	PS/2 & USB	PS/2 & USB
Maximum Resolution	1024 x 768	1024 x 768	1024 x 768	1280 x 1024	1280 x 1024	1280 x 1024
Rent*	\$22.40/wk	\$25.63/wk	\$29.45/wk	\$24.56/wk	\$28.83/wk	\$32.61/wk
Part Number	H2100	S6917	S6919	P2058	S6920	S6922
Price	\$1,999	\$2,399	\$2,799	\$2,299	\$2,699	\$3,099

ALL these products above are for delivery only. Delivery charges apply. See page 63 for details.

CABLES REQUIRED FOR SERVERLINK LCD - USE PS/2, USB OR COMBINATION OF BOTH

Q1289 2m HD KVM Cable - PS2/VGA **\$29**

T3828 2m HD KVM Cable - USB/VGA **\$29**

Q1290 5m HD KVM Cable - PS2/VGA **\$59**

T4274 5m HD KVM Cable - USB/VGA **\$59**

SERVERLINK ELITE KVM

The ServerLink Elite KVM switches allow you to control your servers with a single keyboard monitor and mouse. Using high-density connections, these 8 and 16 port switches use only 1U of rack space making them the ideal choice for any server room where space is at a premium.



Rent* \$6.57/wk

N6589 8 PORT KVM **\$469**

P2748 8 PORT KVM Inc 8 x 2m Cables **\$587**

Rent* \$6.71/wk

Rent* \$8.39/wk

N8989 16 PORT KVM **\$599**

P2749 16 PORT KVM Inc 16 x 2m Cables **\$749**

These products are for delivery only. Delivery charges apply. See page 63 for details.

SERVERLINK STAR KVM



Control two PCs with a single keyboard, monitor and mouse. All ServerLink Star KVM switches have audio and microphone support for multimedia applications.

2 PORT PS/2 KVM

Q5539 **\$73**

2 PORT USB KVM

Q5540 **\$83**

2 PORT PS/2+USB KVM

Q5541 **\$79**

SERVERLINK IP ACCESS DEVICE ADD IP REMOTE ACCESS TO YOUR EXISTING KVM!



Access your servers from anywhere in the world! The ServerLink IP allows network administrators to manage, configure, troubleshoot and even reboot remote servers from a web browser.

Rent* \$8.67/wk

Q5544 **\$774**

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

NETWORKING SOLUTIONS

PCI ETHERNET ADAPTER
DFE-528TX

J5577

\$27

PCMCIA NOTEBOOK ETHERNET
ADAPTER
DFE-690TXD

E7047

\$65

PCI GIGABIT ETHERNET
ADAPTER
DGE-530T

L6113

\$38

PCMCIA NOTEBOOK GIGABIT
ETHERNET ADAPTER
DGE-660TD

R7482

\$70

POWER OVER ETHERNET
ADAPTER
DWL-P50

R7524

DELIVERY ONLY \$60

WIRELESS LAN POWER OVER
ETHERNET KIT
DWL-P200

Image used for illustration purposes only

R2785

DELIVERY ONLY \$88

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

FOR YOUR CHANCE TO WIN

AN XBOX 360!!

Purchase a minimum \$200 of any D-Link products on one invoice from Harris Technology between 1 April and 31 May 2006 and tell D-Link in 25 words or less how you will use your D-Link products. The 3 most innovative responses as judged by D-Link will each win an XBOX 360 (premium).

Entries must be received at D-Link by close of business 15 June 2006 and winners will be notified by telephone 30 June 2006. See dlink.ht.com.au for more details.

26 PORT ETHERNET POE WEBSMART SWITCH



DES-1526

- 24 10/100BASE-TX Ethernet ports with PoE
- 2 combo 1000BASE-T/SFP for flexible copper/fiber
- Gigabit connection
- Complies to 802.3af Power over Ethernet standard
- Supplies up to 15.4 watts per PoE port
- Auto-detection of network devices needing PoE
- Active circuit protection with auto-disable of PoE in case of over current

Rent* \$11.18/wk

S7917

DELIVERY ONLY \$998

8 PORT 10/100/1000 UN-MANAGED SWITCH



DGS-1008D

- 8 port 10/100/1000Mbps Gigabit Switch
- 16Gbps switching capacity
- Increase the speed of your network server and backbone connections
- Move large, bandwidth-intensive files faster
- Transfer graphics, CGI, CAD, or multimedia files across the network instantly

K8853

\$169

16 PORT POE WEBSMART SWITCH



DES-1316

- 802.1Q VLAN, maximum 16 groups
- Port-based QoS, maximum 2 queues
- Port Trunking of up to 4 10/100 ports in one trunk
- Port Mirroring
- Management Password-protected access
- Port settings
- Configuration restore/backup

Rent* \$7.05/wk

R7521

DELIVERY ONLY \$629

5 PORT 10/100/1000
UN-MANAGED SWITCH

DGS-1005D

- 5 port 10/100/1000Mbps Gigabit Switch
- 1Gbps switching capacity
- Increase the speed of your network server and backbone connections
- Move large, bandwidth-intensive files faster
- Transfer graphics, CGI, CAD, or multimedia files across the network instantly

K8301

\$99



These products are for delivery only. Delivery charges apply. See page 63 for details.

WIRELESS / BROADBAND SOLUTIONS

AIRPLUS XTREME G 108Mbps WIRELESS STORAGE ROUTER



AIRPLUS G 11/54Mbps WIRELESS ROUTER WITH PRINT SERVER



DI-624S

- Wirelessly share broadband Internet connection
- 802.11g, 802.11b compatible
- Advanced firewall & parental control
- Two USB 2.0 ports to connect to storage devices/printers

T0648

\$179

DI-524UP

- Built-in 4 port fast Ethernet switch
- Advanced Firewall features, VPN pass through
- WEP, WPA & 802.1X Security
- UPnP enabled
- Built-in USB print server
- Detachable antenna

T0646

\$129

NETWORK SECURITY APPLIANCE WITH VPN CLIENT SOFTWARE



DFL-700/DS-601

- Easy-to-deploy VPN and firewall solution
- Integrated network address translation (NAT)
- SPI firewall
- Advanced content filtering features
- Virtual private network (VPN) support.
- **BONUS DS-601 VPN client software**

T6572

Rent* \$8.39/wk

\$749

HIGH-SPEED 2.4GHZ WIRELESS RANGE EXTENDER



DWL-G710

- Up to 54Mbps
- Works with virtually all 802.11g wireless devices
- Increase the coverage area of your wireless network
- Supports WPA-PSK and WPA2-PSK for enhanced wireless security

T4599

\$149

XTREME G WIRELESS ACCESS POINT



DWL-2100AP

- Up to 108Mbps
- WPA & 802.1x authentication
- SNMP management software included
- Also work as point-to-point bridge, point-to-multipoint bridge, repeater, wireless client

N6053

\$199

AIRPREMIER 11 / 54 / 108Mb WIRELESS LAN ACCESS POINT



DWL-3200AP

- 802.11g 108Mbps wireless connectivity
- Supports WPA-personal, WPA-enterprise, 802.1x, AES
- Also works as wireless distribution system with AP
- Wireless frequency range : 2.4GHz to 2.4835GHz

T5891

\$397

ALL IN ONE ADSL 2/2+ MODEM/ROUTER WITH 54Mbps WIRELESS AND BUILT-IN 4-PORT SWITCH DSL-G604T



P3062

\$164

ADSL 2/2+ MODEM/ ROUTER WITH BUILT-IN 4-PORT SWITCH DSL-504T



S1493

\$108

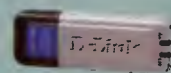
ADSL USB/ETHERNET COMBO MODEM/ROUTER DSL-502T



R6714

\$85

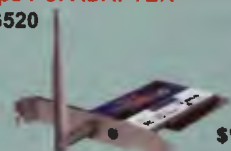
AIRPLUS XTREME G WIRELESS 108Mbps USB ADAPTER DWL-G132



S7919

\$93

AIRPLUS XTREME G WIRELESS 108Mbps PCI ADAPTER DWL-G520



H9622

\$79

AIRPLUS XTREME G WIRELESS 108Mbps NOTEBOOK ADAPTER DWL-G650



H9621

\$79

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

These products are for delivery only. Delivery charges apply. See page 63 for details.

LINKSYS®

A Division of Cisco Systems, Inc.

A LEADER IN WIRELESS NETWORKING

ALL-IN-ONE USB NETWORK ADAPTER AND WI-FI FINDER



WUSB54G

- High-speed Wireless G networking for your desktop or notebook computer
- Built-in Wi-Fi Finder detects Wireless G and Wireless B signals
- Easy to read display shows network name, channel, signal strength, and security on/off
- Wireless communications are protected by up to 128 bit WEP or WPA encryption

T5537 **\$139**

IP BUSINESS PHONE



SPA941-AU

- Affordable and full featured 2 or 4 line business class IP telephone
- Connect directly to an Internet telephone service provider, or connect to an IP PBX
- Up to 4 lines. Speakerphone, caller ID, call hold, transfer, conferencing, blocking and more
- Easy installation and secure remote provisioning. Menu based and web based configuration

T4759 **\$259**

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

WIRELESS G BROADBAND ROUTER



WRT54G

- All-in-one wireless internet router, allows you to share your broadband connection wirelessly, 802.11G wireless, 4 port 10/100 Ethernet switch
- Wireless data rates up to 54Mbps
- Shares a single internet connection and other resources with ethernet wired and Wireless G clients
- Advanced wireless security with 128 bit WEP encryption, MAC or IP address filtering
- 3 year manufacturer limited warranty

H9739 **\$124**

WIRELESS G ADSL GATEWAY WITH 2 PHONE PORTS



WAG54GP2

- ADSL2+ Modem, Internet-sharing Router, 4-Port Switch and Wireless-G Access Point in one box
- High-speed ADSL2+ Modem gives you a fast, "Always On" connection to the Internet
- Connect your home PCs and other wireless devices to the Gateway and the Internet using the built-in Wireless-G Access Point, or connect directly with the 4-port Ethernet Switch
- Two standard phone jacks enable feature-rich telephone service over your DSL Internet connection

T6435 **\$299**

COMPACT WIRELESS-G INTERNET VIDEO CAMERA



WVC54GC

- Sends high-quality live video to your network wirelessly - viewable from Windows PCs anywhere
- Built-in stand-alone web server, no PC necessary
- Security Mode automatically sends email alerts with video clips upon motion detection
- Supports up to four simultaneous remote users

T6437 **\$259**

24 PORT FAST ETHERNET SWITCH WITH WEBVIEW



SRW224G4

- Optimised for growing businesses with 4 expandable Gig ports
- Secure management via SSH/SSL and secure user control via 802.1x and MAC filtering
- IGMP snooping, L2/L3 COS, queuing and scheduling makes solution ideal for Voice/Video

T4761 **\$499**

24 PORT FAST ETHERNET SWITCH WITH POE



SRW224P

- Delivers reliable power over 10/100 ethernet ports using IEEE 802.3af standard
- Secure management via SSH/SSL and secure user control via 802.1x and MAC filtering

T5542 **\$899**

48 PORT FAST ETHERNET SWITCH WITH WEBVIEW



SRW248G4

- 48 - 10/100 Switched RJ-45 ports deliver up to 200Mbps of throughput per port
- Intelligent traffic management with rate limiting, policing, shaping and storm control

T5539 **\$899** Rent* \$10.07/wk

48 PORT FAST ETHERNET SWITCH



SRW2048

- 48 - 10/100/1000 switched RJ-45 ports
- 4 shared mini-GBIC ports
- Port based and 802.1q based VLAN's support up to 256 VLANs

T5544 **\$1,699** Rent* \$19.04/wk



These products are for delivery only. Delivery charges apply. See page 63 for details.

ENGIN VOICE OVER IP SOLUTIONS



"10c Untimed, Anytime, Anywhere to any Landline phone across Australia"

ENGIN VOICE BOX SERIES 1

ENGIN VOICE BOX SERIES 2



Purchase an engin VoiceBox and receive a DECT Oricom Handset valued at \$59! (via redemption¹)



The engin Voice Box Series 1 converts your analogue phone signal to digital so that it can be sent over your broadband Internet connection. Simply connect a standard telephone and modem/router. Make and receive phone calls to anyone anywhere. The engin Voice Box Series 1 offers the ability to connect 2 telephone lines to engin.

The engin Voice Box Series 2 is perfect for an ADSL broadband connection. You can also connect your existing landline so that you can still receive phone calls from your existing telephone number, but still take advantage of engin's great call rates. You will never miss a call with the engin voicebox series 2, in the event of a power or broadband outage your telephone calls will be diverted back to your landline phone service.

S9648

\$139

S9649

\$199

ENGIN ENABLED LINKSYS ROUTER

ENGIN ENABLED WIRELESS LINKSYS ROUTER



Purchase an engin enabled Linksys router and receive a DECT Oricom Handset valued at \$59! (via redemption¹)



Feature rich engin telephone service and Internet sharing all in one Box!

Connect any telephone to the Linksys Broadband Router and it will convert your analogue phone signal to digital so that it can be sent over your broadband Internet connection. Make and receive phone calls to any phone number worldwide using your Linksys Broadband Router and enjoy massive savings on your phone bills.

- Connect up to 2 engin telephone services and enjoy engin's great rates
- All-in-one Internet-sharing Router PLUS 3 port switch
- Powerful SPI firewall and QoS

Feature rich engin telephone service, Internet sharing and Wireless Access point all in one box!

Make and receive phone calls to any phone number worldwide using your engin enabled Linksys Broadband Router and enjoy massive savings on your phone bills. Connect any telephone to the engin enabled Linksys Broadband Router and it will convert your analogue phone signal to digital so that it can be sent over your broadband Internet connection.

- Connect up to 2 engin telephone services and enjoy engin's great rates
- All-in-one Internet-sharing router, 3 port switch, plus 54Mbps wireless-G (802.11g) access point
- High security: Wi-Fi protected access™ (WPA), and, powerful SPI firewall

T0725

RT31P2-EA

\$169

T0726

WRT54GP2-EA

\$199

LOCAL CALLS
10c Untimed

NATIONAL CALLS
10c Untimed

MOBILE CALLS
27c per minute

INTERNATIONAL CALLS
from 3.5c per minute

ENGIN TO ENGIN CALLS ARE FREE OF ANY ENGIN CHARGES

ENGIN KEY FEATURES

- No Lock In Contracts
- \$9.95 access fee includes geographical telephone number
- 30 day trial period
- No peak or off peak times
- Real time billing
- Free Voicemail
- Receive voicemail messages into your email inbox
- Caller ID
- Call blocking
- Call forwarding
- Call waiting
- Conference calling
- Works with all broadband services (wireless, ADSL and cable)
- Supports dialling 000 (emergency service numbers)

¹ DECT Oricom Handset offer valid from 01/05/06 to 31/05/06 and fulfilled directly from engin, for full terms and conditions see engin.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

CD/DVD PRODUCTION

EVOCEPT COPYBLAST SERIES



evocept

- New Standalone Disc Duplication Towers
- DVD/CD and CD versions available
- Choose from 3 or 7 burning drives
- Pro DVD version includes 160GB hard drive for faster burns and storage of commonly used masters
- Up to 16x DVD with dual layer support
- Test, copy and verify functions all supported

DVD 3 DRIVE

T4713 **RENT ONLY** Rent* \$11.19/wk **\$999**

DVD 3 DRIVE PRO

T4714 **RENT ONLY** Rent* \$12.87/wk **\$1,149**

DVD 7 DRIVE

T4715 **RENT ONLY** Rent* \$17.92/wk **\$1,599**

DVD 7 DRIVE PRO

T4716 **RENT ONLY** Rent* \$19.60/wk **\$1,749**

*RENTSMART

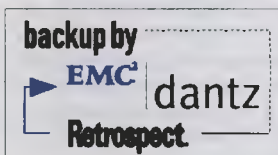
The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



PRIMERA
TECHNOLOGY, INC.



PRIMERA OPTIVALT ARCHIVAL APPLIANCE

Archive Emails and Critical Data on Robust Optical Media

Like most companies you probably use tape for backups. It's great for everyday use. But tape has a few issues. It can break. It wears out and can become demagnetised. It requires human intervention. All of these issues can put your most valuable data at risk. The new Optivault solves all these problems. It uses reliable, archival grade WORM (Write Once Read Many) optical discs. It's the perfect automated solution when you absolutely, positively can't lose your irreplaceable files and data.

Powered by EMC Dantz Retrospect Software.

Features:

- Quick and efficient searches using the industry's most sophisticated high-speed indexing
- Fast, reliable recoveries
- No more broken or damaged tapes
- Advanced robotics means no more manual loading of tapes or cartridges

Rent* \$53.51/wk

T3963 1 DVD+R DRIVE

RENT ONLY **\$5,799**

RIMAGE DTP 2000I PUBLISHER



RIMAGE™

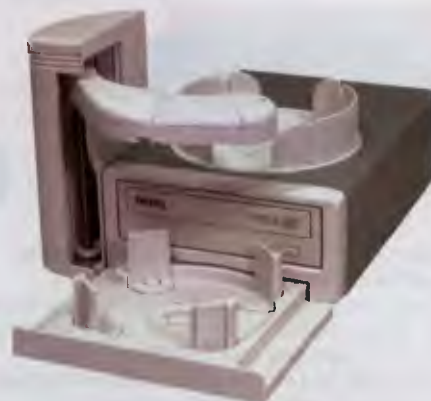
- Totally automated and hands free
- 2 DVD/CD Drives, 100 Disc Capacity
- Incorporates 480i disc printer
- Duplication and Publishing capability
- Network software supports PC or Mac clients
- Up to 2 units on one PC

Rent* \$59.63/wk

N2213 2 DVD±R DRIVE

RENT ONLY **\$6,699**

MINI CUBIS DVD DUPLICATOR



The world's smallest automated DVD duplicating desktop unit! Perfect for that small office space.

- 25 disc capacity
- PC connected
- Built in mini disc/business card disc adapter

Rent* \$12.31/wk

Q2051 1 DVD±R DRIVE

RENT ONLY **\$1,099**

RENT ONLY All Region4 products are available for delivery only. Delivery charges apply. See page 63 for details.

BURNING AND PHOTO/VIDEO EDITING MADE EASY

ULEAD VIDEOSTUDIO V10 PLUS

ULEAD DVD MOVIEFACTORY 5



VideoStudio v10 Plus is easy-to-use software that turns home videos into fun-to-watch movies! Preserve your precious movies on DVD, CD, tape, the Web or mobile devices to share with family and friends.



DVD MovieFactory® 5 is easy-to-use disc authoring and burning software for today's digital lifestyle. Turn your standard or HD video and photos into DVDs with studio-quality personalised menus.

ULEAD PHOTOIMPACT 11 RETAIL



With PhotoImpact, you can:

- Breeze through everyday photo tasks
- Experience high-end image editing
- Expand your creative horizons
- Discover unrivaled value

T1655



\$179

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For more details see rentsmart.ht.com.au.

T6640

\$199

T6642



\$99

PIONEER PRODUCTS

PIONEER SUPER MULTI DVD WRITER

The DVR-A11XL high speed DVD burner introduced by Pioneer enables computer users to create personal DVD movies, make digital photo slideshows, burn music CDs and back up your data files onto DVD-R, -RW, +R, +RW and RAM discs with ease. It also works with dual layer discs, increasing the capacity of a disc from 4.7 to 8.5 gigabytes for even more storage space. Available in Black and Beige.

Write speed:

DVD-R 16x, 12x, 8x, 6x, 4x, 2x, 1x
DVD-RW 6x, 4x, 2x, 1x
DVD-R DL 8x, 6x, 4x, 2x
DVD+R 16x, 12x, 8x, 6x, 4x, 2.4x
DVD+RW 8x, 6x, 4x, 2.4x
DVD-R DL 8x, 6x, 4x, 2.4x
DVD-RAM 5x, 3x, 2x
8cm DVD-R/RW, DVD+R/RW with Adapter 2x, 1x
CD-R 40x, 32x, 24x, 16x, 10x
CD-RW 32x, 24x, 20x, 16x, 10x, 4x

T6352 BLACK

\$99

T6353 BEIGE

\$99



NERO 7 ESSENTIALS



The All-In-One Bundle Solution for Data, Audio, Photo and Video

The new writers will come bundled with an extensive collection of NERO 7 Essentials software applications for DVD/CD authoring, editing, and data recording.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

These products are for delivery only. Delivery charges apply. See page 63 for details.

QUALITY AND INNOVATION, NO RISK

**SAMSUNG - SCX-4216F
MULTIFUNCTION PRINTER**



The Samsung SCX-4216F is a flatbed monochrome laser MFP featuring 17ppm, 600 dpi, 30-page ADF, parallel/USB connectivity, and flatbed colour scanning.

FEATURES:

- Print, Copy, Fax, Scan
- Colour scanner
- Auto document feeder
- Telstra Duet compatible

J2137

\$399

SCX-4216F 3,000 PAGE TONER

J9653

\$99

SCX-4521F 3,000 PAGE TONER

T6647

\$119

SCX-4200 3,000 PAGE TONER

T6648

\$119

***RENTSMART**

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For more details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

**SAMSUNG SCX-4200
LASER MULTIFUNCTION PRINTER**

The SCX-4200 Digital Productivity Center is perfect for home use, home office or back to school. Delivering true 3-in-1 multifunction capability at laser printing costs significantly less than inkjet.

FEATURES:

- Worlds smallest laser multifunction printer
- Stand alone mono digital copier
- Colour scanner (includes OCR software)
- Up to 18ppm print and copy speeds
- Up to 600 dpi effective output resolution
- Compact and convenient flatbed design
- High-speed USB 2.0
- 250-sheet cassette, 1-sheet manual tray
- Copy functions: Auto Fit, Clone, Poster, ID Card
- 50 – 200% copy zoom
- Compatible with Windows
- 2 year warranty

**NEW PRODUCT
LAUNCH**



MAY BONUS! USB CABLE AND 2 REAMS OF A4 PAPER

T6637

\$279

**SAMSUNG SCX-4521F
LASER MULTIFUNCTION PRINTER**

Small size. Big results. The compact SCX-4521F is an economical and efficient 4-in-one solution for home-based and small office settings. Print sharp text and graphics, fax fast with 3-second scan and 3-second transmission speeds. Fax directly from your PC. Or copy and scan with distinctly professional results.

FEATURES:

- Up to 20ppm print and copy speeds
- Up to 600 dpi output resolution
- Compact and convenient flatbed design
- 4800 dpi enhanced colour scanning
- 33.6 Kbps fax modem, 3-second transmission
- PowerSave™, TollSave™ and TonerSave™ efficiency modes
- Mono copy functions: Auto Fit, Collation, Clone, Poster, ID Card
- 25-400% copy zoom
- Compatible with Windows

NEW PRODUCT LAUNCH



MAY BONUS! USB CABLE AND 2 REAMS OF A4 PAPER

T6638

\$499



QUALITY AND INNOVATION, NO RISK



SAMSUNG CLP-510 COLOUR LASER PRINTER

Duplex colour laser... print your brochures the way they were designed.

FEATURES:

- 6ppm colour/24ppm mono duplex laser
- Memory 64 MB RAM
- Emulation SPL-C (Samsung Printer Language Colour)
- USB 2.0 connectivity
- Free Built-In Duplex - create double-sided print-outs at the touch of a button
- Windows only compatibility
- 3 year onsite warranty

S2190

\$479

END OF FINANCIAL YEAR BONUS! BONUS 500 SHEET PAPER TRAY¹

with every purchase of Samsung CLP-510, CLP-550N, CLP-2511N or ML-3561ND printers

CLP-550N COLOUR LASER PRINTER

Duplex colour laser... print your brochures the way they were designed.

FEATURES:

- 5 ppm colour/20 ppm mono duplex laser
- Memory 128MB RAM
- Postscript 3 and PCL 6 emulation
- Ethernet, Parallel and USB 2.0 connectivity
- Free Built-In Duplex - create double-sided print-outs at the touch of a button
- Revolutionary NO-NOIS technology for a calmer and quieter office
- Windows, Mac (OS8+) and Linux compatibility
- 3 year onsite warranty



Rent* \$9.29/wk

P9392

\$829

ML-2551N MONO LASER PRINTER

The standard in network printing... great for demanding users.

FEATURES:

- 24ppm duplex mono laser printer
- Memory 32MB RAM
- Postscript 3 and PCL 6 emulation
- Windows, Mac (OS8.6+) and Linux
- Ethernet, Parallel and USB 2.0 connectivity
- Cost-per-page as low as 1.8 cents with toner save on
- Print up to 100,000 pages per month

Rent* \$9.85/wk

\$879



M4990

SAMSUNG CONSUMABLES



CLP-510 5,000 PAGE TONER

S2536 CYAN	\$169
S2537 MAGENTA	\$169
S2538 YELLOW	\$169

CLP-510 7,000 PAGE TONER

S2534 BLACK	\$159
-------------	--------------

CLP-550N 7000 PAGE TONER

M9755 BLACK	\$155
-------------	--------------

CLP-550N 5000 PAGE TONER

M9756 CYAN	\$175
M9757 MAGENTA	\$175
M9758 YELLOW	\$175

ML-2551N 10,000 PAGE TONER

L7764	\$275
-------	--------------

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

¹ Valid 01/05/06 till 30/06/06. Via redemption from Samsung. See samsung.ht.com.au for more details.

THE NEW HP LASERJET 3000 SERIES

HP COLOR LASERJET
3000 SERIES

- Printing speed 29ppm mono, 15ppm colour
- Quality colour printing with HP ImageRet 2400
- Intuitive, 2 line display with a built in help function
- 250-sheet top output bin with long paper extension
- One door access to the easy to install print cartridges

HP COLOR LASERJET 3000N
128 MB RAM total memory, plus
one open DIMM slot and one open
EIO slot



Rent* \$17.81/wk

T3252 Network

\$1,589

HP COLOR LASERJET 3000DN
256 MB RAM total memory, plus
one open DIMM slot and one open
EIO slot



Rent* \$20.06/wk

T3254 Duplex Network

\$1,790

**These products are for
delivery only. Delivery
charges apply. See page 63
for details.**

***RENTSMART**

The figures quoted are based on a per
week basis over 3 years. Terms and
conditions apply.

PLEASE NOTE:

All purchases subject to terms &
conditions and returns policy.
Delivery charges may apply.
Not all items stocked in store but
available for pick-up/delivery



WHO PRINTS IN COLOUR IS IN YOUR HANDS

The new HP LaserJet 3000 series. Turn colour on or off as it's required.

Wouldn't it be great if you could turn colour printing on or off in your business by individual users or departments? With the new HP Color LaserJet 3000 you're in control. Using the colour access control, you can select by user, department or even application; where, when and who uses colour.

Plus you don't have to compromise on black-and-white performance. The HP Color LaserJet 3000 provides you with the same speed, cost per page, reliability and networkability as a mono laser printer. And with features like new, patented HP ColorSphere toners, high impact colour and text, crisp detail and realistic imaging, you can be assured of quality whether you're printing in black-and-white or colour.

The new HP Color LaserJet, it's the clever way to take total control of office colour.

Color LaserJet 3000 vs. Mono Lasers[†]

Speed black-and-white	✓ same
Cost per page black-and-white	✓ same
Processor	✓ faster
Paper in capacity	✓ same
Memory [‡]	✓ extra 64MB
PLUS extra	
Colour speed	✓ 15ppm
Colour switch off by user	✓
Colour locking by application	✓
Colour usage reporting	✓

[†] Based on comparison to HP LaserJet 2420 series.

[‡] Based on HP Color LaserJet 3000n and HP LaserJet 2420n.



invent

harristechnology



Printers

HP COLOUR LASERJET PRINTERS

HP COLOR LASERJET 2600N PRINTER

**BONUS
\$50
CASHBACK¹**



- Fast 8ppm colour laser printing
- High quality, reliable and quiet entry level in line printing
- Vibrant quality colour printing with ImageREt2400
- Standard 10/100 network printing
- Standard 375 page input for versatile printing
- Small true personal desktop design

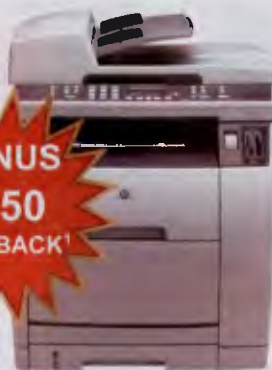
Rent* \$6.60/wk

S2505 HP Color LJ 2600N

\$589

HP COLOR LASERJET 2840 MFP

**BONUS
\$150
CASHBACK¹**



- Network ready Color LaserJet all-in-one
- Print, scan, copy and digital card-slot
- Fast laser printing 19ppm mono and 4ppm colour
- 1200 dpi resolution scanner
- Super G3 Fax V.34 fax modem (up to 33kbps)

Rent* \$18.93/wk

S1217 HP Color LJ 2840

\$1,689

HP COLOUR LASERJET 4700 SERIES



- Perfect for your work group
- Fast 30 ppm A4 mono and colour printing
- High quality printing with HP ImageREt 3600
- After speed add: Duplex prints at 30ppm
- Versatile paper handling and connectivity
- Duty cycle up to 100,000 per month

Rent* \$33.03/wk

T3587 HP Color LJ 4700N

\$3,139

Rent* \$40.98/wk

T3589 HP Color LJ 4700DN

\$4,015

HP COLOR LASERJET 3800 SERIES



- Affordable high volume colour printing
- Fast 21ppm colour and 21ppm mono printing
- 96MB RAM (160MB for CLJ3800n, 288MB for CLJ3800dn)
- High quality printing with HP ImageREt 3600
- 533MHz processor
- Duty cycle up to 65,000 per month

Rent* \$21.46/wk

T3256 HP Color LJ 3800N

\$1,915

Rent* \$26.70/wk

T3258 HP Color LJ 3800DN

\$2,499

HP COLOR LASERJET 3600 SERIES



- Make your mark in vibrant colour
- Simplify, save time, reduce costs
- Promote your business more effectively than ever
- Meet your workteam's needs with flexible paper handling
- Affordable high volume colour printing for the small workgroup
- Fast 16ppm colour and 16ppm mono printing
- 360MHz processor
- Duty cycle up to 50,000 per month

HP Color Laserjet 3600

Rent* \$11.19/wk

T3243

\$999

HP Color Laserjet 3600N

Rent* \$14.89/wk

T3244

\$1,329

HP Color Laserjet 3600DN

Rent* \$20.68/wk

T3250

\$1,845

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

¹ Cash backs valid from 18/04/06 till 30/06/06. Via redemption from HP. See hp.ht.com.au for more details.

DELIVERY ONLY These products are for delivery only. Delivery charges apply. See page 63 for details.



invent

HP OFFICE AND BUSINESS INKJET PRINTERS

HP DESKJET 460CB



Print high quality black and colour on-the-go!

- Up to 1200 x 1200 rendered dpi black
- Print: up to 17ppm black and 16ppm colour
- PictBridge/USB 2.0 full speed port, card slots for CompactFlash Type I, Secure Digital, and MultimediaCard
- 50 sheet input tray
- Battery included (print up to 450 pages)
- Up to 4800 optimised dpi colour
- Optional 6 ink photo printing
- Direct photo printing via CF, SD, MCC card slots and PictBridge enabled cameras

T3509

\$459***RENTSMART**

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

HP OFFICEJET PRO K550/DTN



OfficeJet Pro K550DTN pictured

Up to 30% lower cost per page than similarly priced colour laser printers. Up to 2 times the speed of entry level colour laser printers.

K550

- Print up to 37ppm mono, 33ppm colour
- Up to 4800 optimised dpi
- 4 individual ink cartridges
- 250 sheet input tray
- 7500 page duty cycle

K550DTN

- Print up to 37ppm mono, 33ppm colour
- Up to 4800 optimised dpi
- 4 individual ink cartridges
- 250 sheet input tray
- 7500 page duty cycle
- **Automatic double-sided printing**
- **Additional 350 sheet input tray**
- **Built-in wired Ethernet connectivity**

T3724 K550

\$329

T4312 K550DTN

\$485

HP DESKJET 1280 A3 PRINTER



Wider Prints, Wider Value – Now with \$75 Cash Back

- Produce wide format prints in vibrant, natural colour
- Print up to A3+
- Print A4: up to 14ppm black and 11ppm colour
- HP PhotoREt III enhanced colour layering technology
- Up to 4800 x 1200 optimised dpi colour

R9756

\$399

HP BUSINESS INKJET 1000

**Colour at high volume and low cost!**

- **Print:** up to 23ppm black and 18ppm colour
- 150 sheet input tray
- 8MB RAM
- High-capacity individual ink cartridges
- Duty cycle: 6250 pages per month

S2344

\$199

HP OFFICEJET 5610 ALL-IN-ONE



- **Print:** up to 20ppm black, 13ppm colour
- **Fax:** 33.6kbps fax modem
- **Scan:** 1200 x 2400 dpi optical resolution
- **Copy:** up to 20ppm black, 13ppm colour
- 2 line text LCD display
- Junk fax barrier

T3163

\$245

¹ Cash back offer valid from 18/04/06 till 30/06/06. Cash back offers via redemption through HP. See hp.ht.com.au for more details.

HP ALL-IN-ONES

PHOTOSMART 3310 ALL-IN-ONE



Worlds fastest photo-printing all-in-one with wireless technology.

- **Print and Copy:** up to 32ppm black and 31ppm colour
- **Fax:** 33.6Kbps fax modem
- **Scan:** 4800 x 4800 dpi optical resolution
- Wireless 802.11g
- 6 individual ink cartridges
- Scans slides & negatives with the included Transparent Material Adapter
- 3.6" colour graphic display
- Memory card reader and PictBridge

T1646

\$479

PHOTOSMART 3110 ALL-IN-ONE



Worlds fastest photo-printing all-in-one.

- **Print and Copy:** up to 32ppm black and 31ppm colour
- **Fax:** 33.6Kbps fax modem
- **Scan:** 4800 x 4800 dpi optical resolution
- 6 individual ink cartridges
- View, edit and print photos with or without a PC
- 2.5" colour graphic display
- Memory card reader and PictBridge

T1638

\$379

HP PSC 1610 ALL-IN-ONE



Enjoy photos that last for generations with multifunction convenience.

- **Print and Copy:** up to 23ppm black and 18ppm colour
- **Scan:** 1200 x 4800 dpi optical resolution
- Optional 6 ink photo printing
- 2 line text LCD
- Memory card reader and PictBridge

R5058

\$169

HP PSC 1510 ALL-IN-ONE



Easy to use all-in-one with PictBridge for direct photo printing.

- **Print and Copy:** up to 20ppm black and 18ppm colour
- **Scan:** 1200 x 1200 dpi optical resolution
- Optional 6 ink photo printing
- PictBridge

T2406

\$139

HP PSC 1410 ALL-IN-ONE



Compact all-in-one with fold-up paper tray: Basic photo printing.

- **Print and Copy:** up to 18ppm black and 13ppm colour
- **Scan:** 600 x 2400 dpi optical resolution
- Optional 6 ink photo printing

T4297

\$95

HP DESKJET 3940



Easy-to-use, compact printer for basic photo and document printing.

- Up to 4800 optimised dpi
- Up to 1200 x 1200 dpi black
- Up to 16ppm black
- Up to 12ppm colour
- 80 sheet input tray, 50 sheet output tray
- Intuitive, on-screen menus for easy operation

S7444

\$69

PHOTOSMART 8230



Worlds fastest photo printer.

- **Print:** up to 32ppm black and 31ppm colour
- 6 individual ink cartridges
- View, edit and print photos with or without a PC
- 2.5" colour graphic display
- Memory card reader and PictBridge

T1632

\$325

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



invent

MONO LASERJET PRINTER SERIES

HP LASERJET 2430 SERIES



- Prints up to 33ppm
- 1200 dpi REt and FastRes 1200 dpi
- 64MB RAM, expandable to 320MB
- 400MHz processor

HP LJ 2430TN Rent* \$24.18/wk
Q2892 **\$2,158**

HP LJ 2430DTN Rent* \$24.45/wk
Q2893 **\$2,289**

HP LASERJET 4250 SERIES



- Up to 43ppm in A4
- Resolution: 1200 dpi
- 500 sheet tray and 100 sheet multi-purpose tray
- Monochrome laser
- Two open industry-standard CompactFlash slots

HP LJ 4250 Rent* \$19.04/wk
Q3919 **\$1,699**

HP LJ 4250N Rent* \$24.30/wk
Q2900 **\$2,275**

HP LJ 4250TN Rent* \$28.83/wk
Q2894 **\$2,699**

HP LJ 4250DTN Rent* \$34.18/wk
Q2890 **\$3,249**

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery

LASERJET 1020



- **Speed:** Prints up to 14ppm in A4
- **First page out:** 10 seconds
- **Resolution:** 1200 dpi
- **Duty cycle:** 5000 (pages/month)
- **Connectivity:** USB 2.0 high speed

R9102

\$219

LASERJET 1022 SERIES



- **Speed:** Prints up to 18ppm in A4
- **Resolution:** 1200 dpi
- **Duty cycle:** 8000 (pages/month)
- **Connectivity:** USB 2.0
- 8MB RAM

R9103 LJ 1022

\$310

R9104 LJ 1022N

\$499

LASERJET 1320 SERIES



- **Speed:** Prints up to 21ppm in A4
- **Resolution:** 1200 dpi
- **First page out:** 8.5 seconds
- 16MB RAM
- 133MHz processor

Rent* \$6.60/wk

P9319 LJ 1320

\$589

Rent* \$8.17/wk

P9320 LJ 1320N

\$729

Rent* \$10.07/wk

P9321 LJ 1320TN

\$899

LASERJET 3050 ALL-IN-ONE



- **Print:** 18ppm, first page out less than 8 sec, 1200 x 1200 dpi 264Mhz, 64MB RAM
- **Copy:** 600 x 600 dpi, 24 bit depth
- **Scan:** 600 x 600 dpi (up to 19,200 dpi enhanced)
- **Fax:** V.34 fax modem - 33.6 kbps

T4389

\$499

LASERJET 3055 ALL-IN-ONE



- **Print:** 18ppm, first page out less than 8 sec, 1200 x 1200 dpi 264Mhz, 64MB RAM
- **Copy:** Flatbed 600 x 600 dpi, 24 bit depth
- **Scan:** 600 x 600 dpi optical resolution (9600 dpi enhanced) colour scanning
- **Fax:** 33.6kbps

Rent* \$8.95/wk

T4390

\$799

LASERJET 3390 ALL-IN-ONE



- **Print:** 21ppm, first page out less than 10 sec, 1200 x 1200 dpi 264Mhz, 64MB RAM
- **Copy:** Flatbed 600 x 600 dpi, 24 bit depth
- **Scan:** Flatbed 1200 x 1200 dpi (up to 19,200 dpi enhanced)
- **Fax:** V.34 fax modem - 33.6 kbps

Rent* \$12.09/wk

T4392

\$1,079



invent



KONICA MINOLTA

harris technology



Printers & Consumables

HP INKJET CONSUMABLES



HP Supplies
Authorised Reseller



invent

BONUS HP PHOTO PAPER VALUED AT \$35

When you purchase any 2 original HP Inkjet Print Cartridges* specifically marked with a pink tab you will receive a BONUS:

- 1 HP Advanced A4 Photo Paper - 25 sheets - valued at \$17.95
- 1 HP Advanced '4x6' Photo Paper - 60 sheets - valued at \$17.95

Terms and conditions apply. For more details and to register visit
www.hp.com.au/supplies

*Specially marked HP Ink Packs will be limited to the following range: HP C6578DA, HP C1823DA, HP 51645A, HP C6615DA, HP C8727AA, HP C8728AA, HP C6656AA, HP C6657AA, HP Y2025AA, HP Y2016AA, HP Y2017AA

HP ORIGINAL REWARDS

HP Original Rewards is an exciting program from HP that rewards SMB for purchasing (and recycling) HP LaserJet Print Cartridges, Inkjet Cartridges and HP Paper. Register now to receive points for every purchase invoice you send in. Terms and conditions apply. For more details see
www.hp.com.au/originalrewards

HP PLANET PARTNERS

HP Planet Partners and Cartridges 4 Planet Ark have created a program that extends not only the life of your print cartridges, but also the life of the planet. More Information at:
www.hp.com.au/recycle

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For more details see
rentsmart.ht.com.au

KONICA MINOLTA PRINTERS

KONICA MINOLTA magicolor® 2480MF



- Print speed up to 5 ppm colour, 20ppm mono
- Copy speed up to 5ppm colour/20ppm mono (continuous)
- Resolution 2400 x 600 dpi (print), 600 dpi (scan/copy)
- Direct Photo Print
- 1 year replacement warranty, next day service

Rent* \$15.68/wk

T6605

\$1,399

KONICA MINOLTA magicolor® 2430DL



- Personal colour laser printer
- Up to 20ppm mono, 5ppm colour
- 10/100BaseTX Ethernet® & USB 2.0 (high speed) interfaces
- 2400 x 600 dpi resolution
- 200 sheets input standard / 700-sheets input maximum
- Direct Photo Print
- Windows® & Macintosh compatible

Rent* \$8.01/wk

R4297

\$715

KONICA MINOLTA magicolor® 5430DL



- Up to 20ppm A4 colour/monochrome
- 10/100BaseTX Ethernet
- 2400 x 600 dpi resolution
- 64 MB RAM memory
- Duty cycle: up to 60,000 pages per month
- Windows® & Macintosh compatible

Rent* \$17.92/wk

P8495

\$1,599

KONICA MINOLTA pagepro 1390MF



- Print/Copy/Scan/Fax
- Print/Copy speed up to 20ppm
- Resolution 600 dpi (print/copy), 1200 dpi (scan)
- 1 year replacement warranty

Rent* \$6.26/wk

T6606

\$559

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

* Cash back offers valid 1/05/06 - 30/06/06. Via redemption through Konica Minolta. See konicaminolta.ht.com.au for details.

These products are for delivery only. Delivery charges apply. See page 63 for details.

EPSON®

EPSON PRINTERS

EPSON PICTURE
PERFECT IMAGING
SYSTEMCOMBINING LEADING
TECHNOLOGIES FOR
INCREDIBLE PRINT QUALITY

EPSON printer

Genuine
EPSON inkGenuine
EPSON paper**Best Quality**
with the
PerfectPicture
imaging
system

The PerfectPicture Imaging System, which combines the features of four advanced technologies and delivers outstanding print quality at every level - from colour vibrancy to image detail. Combining 4 key technologies to deliver incredible print quality.

***RENTSMART**

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For more details see rentsmart.ht.com.au.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

MULTIFUNCTION PRINTER

EPSON CX3700

- Epson DURABrite ink for improved print quality & durability
- Powerful & easy to use bundled software
- Individual Intellidige™ ink cartridges for greater economy
- True Border-Free™ edge-to-edge photo printing and copying on A4 and 4"x6"



T6651

\$119

MULTIFUNCTION PRINTER

EPSON CX5700

- 5760 x 1440 optimised dpi
- Memory card slots and pictbridge
- 4x6 Photo printing in 51 secs
- Print speed: 20ppm 19ppm
- Copy speed: 18ppm/17ppm
- Scanning: CIS 2300 x 1200dpi



T5925

\$299

PHOTO PRINTER

EPSON STYLUS PHOTO
R350

- Print speed: Up to 15ppm black (A4 memo) and up to 15ppm colour (A4 memo)
- Photo 4" x 6" 58 sec per photo
- Resolution: 5760 Optimised dpi



T4508

\$299

8 CARTRIDGE INK SYSTEM PRINTER

EPSON STYLUS PHOTO R800

- New UltraChrome Hi-Gloss™ pigment inks for outstanding photos
- 5760 optimised dpi using multi layer piezo (MLP) print head for smooth and detailed output
- 1.5pl droplet size and variable sized droplet technology (VSDT)
- Eight individual cartridges including matte black ink and gloss optimiser
- True border free printing up to A4



Rent* \$7.27/w

N9471

\$649

COLOUR LASER

EPSON AL C1100

- Up to 25ppm in black and 5ppm in colour
- Sharp text and dynamic images with an effective resolution of 2400 dpi
- Business photo quality printing featuring Epson's wrap transfer engine
- Flexible paper handling including a standard 250 sheet tray and optional 500 sheet tray



Rent* \$8.73/wk

Q7367

\$779

PHOTO PRINTER

EPSON STYLUS PHOTO R1800

- Print speed: Up to 13ppm black (A4 memo) and up to 13ppm colour (A4 memo)
- Photo 8" x 10" 71 sec+ (Photo)
- Resolution: 5760 x 1440 Optimised dpi
- Paper hold capacity: Up to 120 sheets at 90gsm



Rent* \$13.21/w

S0287

\$1,179

CANON PRINTERS

CANON PIXMA IP90 Portable Bubblejet



- 2pl FINE print-head technology
- PictBridge compatible
- Approximately 16ppm (monochrome) and 12ppm (colour)
- 4800 x 1200 dpi max resolution
- Interface: USB / IrDA v1.1 Infrared / Optional Bluetooth
- Weight: 1.8kg

R8579

\$399

CANON MP800 CD/DVD Printing



- Printer/copier/scanner
- 1 pl FINE print-head technology
- 9600x2400 dpi
- 5 individual ink tanks
- 6x4 photo : 36 sec
- Photo reprint - film/photo
- Copy: DVD/CD direct copy. Auto exposure copy.
- Scan: 2400 x 4800 dpi
- Film/slide scanning, Photo correction
- Camera, Card, Mobile and Film direct
- 3.5" LCD screen
- CD/DVD printing
- Auto duplex/2 way paper feed

T0559

\$439

CANON PIXMA IP5200



(Camera not included)

- Borderless 4"x 6" photo in approx. 36 seconds
- Maximum 9600 x 2400 color dpi with microscopic droplets as small as 1 picoliter
- FINE print head technology for impressive speed and photo quality
- ChromaLife100 system for long lasting, beautiful photos
- Built-in 2 sided printing and second paper tray for convenient paper selection
- PictBridge ready - just connect and print!

T0451

\$229

CANON PIXMA IP1600



- 2 pl ink droplets
- 19ppm mono / 16ppm colour
- USB interface; Windows and Mac compatible
- Up to 4,800 x 1,200 colour dpi resolution
- Up to 600 x 600 dpi for black text
- Improved smudge resistance
- Borderless 4 x 6 inch photos in as little as 70 seconds
- Accepts papers ranging from credit card to legal sizes
- Compact and stylish design

S8201

\$79

DIGITAL CAMERAS



CANON IXUS WIRELESS CAMERA

- 5.0 Megapixel
- 3x optical zoom lens
- 2.0" LCD screen
- Super fast DiG!C II Processor
- Wireless direct printing and image transfer

Rent* \$8.95/wk

T5597

\$799

CONSUMABLES

CANON CLI8BK PHOTO BLACK INK CARTRIDGE

S9587

\$26

CANON CLI8Y YELLOW INK CARTRIDGE

S9565

\$26

CANON CLI8M MAGENTA INK CARTRIDGE

S9564

\$26

CANON CLI8C CYAN INK CARTRIDGE

S9563

\$26

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For more details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

BROTHER PRINTERS

BROTHER FAX-8360P
LASER FAX MACHINE

- Super G3 33.6Kbps high speed fax modem
- Up to 14ppm laser engine for printing of faxes and copies

Rent* \$10.07/wk

G0903

\$899BROTHER FAX 2820
LASER FAX MACHINE

- Mono laser print technology
- Mono faxing capability
- 14.4Kbps fax modem
- Approx 6 seconds per page
- 20 page auto document feeder
- 250 sheet input capacity

S1320

\$349***RENTSMART**

The figures quoted are based on a per week basis over 3 years. Terms and conditions apply. For details see rentsmart.ht.com.au

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



**BONUS
\$150
CASHBACK¹**

BROTHER MFC-9420CN

5-IN-1 COLOUR LASER NETWORK
READY MULTIFUNCTION CENTRE

The Professional Colour Laser Multifunction Centre for the home office or business that requires colour laser printing, copying or Super G3 Faxing.

- Colour laser super G3 33.6Kbps fax/modem speed
- Colour flatbed laser digital copier
- Colour flatbed scanner
- PC fax send/receive
- Print/Copy Speed: up to 31ppm mono, up to 8ppm colour
- Print Speed: less than 15 seconds (mono) / less than 21 seconds (colour)
- Up to 600 x 600 dpi resolution (2,400 dpi class)
- 64MB standard memory (expandable to up to 576MB)
- Up to 250 sheet paper capacity (standard)

Rent* \$16.80/wk

T4070

\$1,499

**BONUS
\$100
CASHBACK¹**

BROTHER MFC 8460N

5-IN-1 SPEED LASER
MULTIFUNCTION WITH BUILT IN
NETWORK

There is no need to compromise with the MFC-8460N since it offers high performance print and copy speeds, color flatbed scanning, a high-speed fax modem and built-in (Ethernet) network interface. Walk-up copying and faxing are convenient and easy for every person in the office. It offers tremendous value with its abundant features and great performance – all of which any small medium business or workgroup can't do without!

- Up to 28ppm
- 1200 dpi resolution
- 32MB standard memory (544MB Max)
- 250 sheets paper capacity
- USB and parallel interface
- Network ready

Rent* \$11.19/wk

T6017

\$999

¹ Cash back offers via redemption through Brother. Valid from 01/05/06 till 30/06/06. See brother.ht.com.au for more details.

CONSUMABLES

INK, TONER & PAPER SUPPLIES

Harris Technology is your one stop shop for all things Ink, Toner and Paper. Whatever you need for your laser printer, multifunction device, photo printer or wide format printer, Harris Technology makes it easier for you to shop. Featuring a wide range of Ink, Toner and Paper from the world's leading IT vendors - simply visit one of our nationwide Business Centres, call our Contact Centre on 1300 13 9999 or visit ink.ht.com.au



DOUBLE A PAPER

A4 White 80gsm 500 Page Ream
T4776 **\$6.49**

A4 White 80gsm 2500 Page Box
T4779 **\$31.90**

A3 White 80gsm 500 Page Ream
T4777 **\$18.95**

HP PAPER

A4 Glossy Photo Paper 175 GSM
50 Sheet pack
N5147 **\$22**

A4 Laser Paper, Soft Gloss
200 Sheet Pack
Q4662 **\$24**

CANON PAPER

6x4 Photo Paper Pro Cards B/less
- 245 GSM - 20 Pack
E4331 **\$15**

A4 Glossy Photo Paper Pro 245
GSM 15 Sheets
C0733 **\$25**

EPSON PAPER

A4 Photo Quality Gloss Paper
20 Sheets
89471 **\$19**

A4 Archival Matte Paper
50 Sheets
A8929 **\$30**

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

HP

HP No 56 Black Inkjet Cartridge	S2199	\$32
HP 51645a - No 45 Black Inkjet Cartridge	22643	\$48
HP C8767WA No 96 Black Ink Cartridge - High Volume	Q1677	\$48
HP c6657aa - No 57 Tri-Colour Ink Cartridge	F9886	\$53
HP C9363WA No 97 Tri Colour Ink Cartridge	Q1870	\$54
HP Q6511x LaserJet Black Toner for 2400 Series 12000 yield	Q4121	\$325

Canon

Canon BCI3eBK Black Cartridge BJC3/6xxx S4/5/6/7xx MCPx00	81586	\$22
Canon BCI15BK Black Ink Cartridge for i70/i80/IP90	H8779	\$25
Canon BCI-6BK Replacement Black Ink Tank	C3420	\$25
Canon PG-40 Black Ink Cartridge for iP1600 and iP2200	S7128	\$38
Canon CL-41 Tri Colour Cartridge for iP1600/iP2200	S9213	\$40

Epson

Epson T0631 Black Ink Cartridge For Epson C67 Printer	T3404	\$13
Epson T0491 Black / Cyan / Magenta / Yellow for R310/RX510 (M0952) (M1054) (M1056) (M1063)		\$17
Epson T0541 Photo Black Photo Stylus R800/R1800	N9687	\$18
Epson T007 Black Ink For Stylus 870/890/895/1270/1290	96455	\$27

Samsung

Samsung Toner for SCX-4216F MFC	J9653	\$99
Samsung ML-2250 Toner 5000 page yield	Q2002	\$145
Samsung CLP-500/CLP-550N Black Toner 7000 page Yield Cyan/Magenta/Yellow for CLP500/550DN 5000 page yield (M9756) (M9757) (M9758)	M9756	\$175 ea
Samsung ML 2150/2151N/ 2551n - 8,000 page toner cartridge	N1521	\$239

Brother

Cyan/Magenta/Yellow for DCP110c/MFC210C/410CN/620CN (Q1659) (Q1660) (Q1661)		\$16 ea
Brother Black Ink Cartridge for DCP110c/MFC210C/410CN/620CN	Q1657	\$29
Brother Toner TN-2025 for HL-2040 Up to 2500 pages A4	R7305	\$79
Brother TN-3060 Toner HL5140/5150D/5170DN/8840/8440	N1558	\$112
Brother TN-6600 Toner Cartridge For Printer/MFC/Fax - Single	95205	\$112

VERBATIM REMOVABLE DATA STORAGE AND SOLUTIONS

IN-EAR STEREO HEADPHONES



- Ear-fitting noise reduction sleeve
- High quality stereo sound

T3816

**\$16**

USB WIRELESS HEADSET



- 2.5GHz USB wireless headset
- Digital transmission for high quality

T3818

**\$119**

PROFESSIONAL HI-FI HEADSET



- Professional super bass 50mm drivers
- Cushioned leatherette ear pads

T3815

**\$32**

MINI USB SPEAKERS



- USB Bus-powered (no external power required)
- 5.1ch Virtual Sound in 2 speakers

T3859

**\$25**

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

DVD+R 100 PACK

16x 4.7GB WHITE INKJET PRINTABLE - SPINDLE

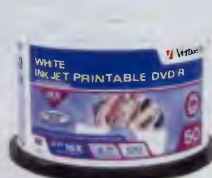


T5712

\$75

DVD-R 50 PACK

16x 4.7GB WHITE INKJET PRINTABLE - SPINDLE



T4157

\$42

DVD-R 50 PACK

8x 4.7GB WHITE THERMAL WIDE - SPINDLE



Q3397

\$37

DVD+R DL 20 PACK

2-4x 8.5GB WHITE INKJET PRINTABLE - SPINDLE



S8528

\$96

DVD+R DL 5 PACK

8x 8.5GB DOUBLE LAYER - JEWEL CASE



T3820

\$37

DVD-R DL 3 PACK

2-4x 8.5GB DOUBLE LAYER - JEWEL CASE



T3376

\$17

DVD-R 25 PACK

16x 4.7GB - SPINDLE



DVD+R 10 PACK

16x 4.7GB - SPINDLE



DVD+RW 30 PACK

4x 4.7GB - SPINDLE



Also available in DVD+R

T4571

\$18

Also available in DVD-R

T4676

\$7

T4574

\$35

CD-R 50 PACK

52x 700MB/80MIN SILVER INKJET PRINTABLE - SPINDLE



Q6490

\$19

CD-R 50 PACK

52x 700MB/80MIN WHITE INKJET PRINTABLE - SPINDLE



Q5985

\$23

CD-R 100 PACK

52x 700MB/80MIN - SPINDLE



Q6476

\$34

These products are for delivery only. Delivery charges apply. See page 63 for details.

COREL PHOTO AND GRAPHICS SOLUTIONS

CORELDRAW GRAPHICS SUITE X3



CorelDRAW Graphics Suite X3 is trusted by busy designers and business users to transform ideas into professional results - fast! With this comprehensive graphics suite, users can confidently tackle a wide variety of projects - from logo creation and web graphics, to multi-page marketing brochures, or eye-catching signs.

Now with enhanced illustration, page layout, photo editing, powerful bitmap-to-vector tracing, and helpful new learning tools, this integrated graphics suite delivers the ultimate combination of superior design capabilities, speed, ease-of-use and affordability that cannot be matched by any other graphics software.

T4499 FULL **\$639**

T4590 UPGRADE **\$315**

T4591 STUDENT & TEACHER* **\$157**

* For qualified educational users and not for commercial use.

COREL PAINTER ESSENTIALS 3



T3377 **\$156**

COREL PAINTSHOP PRO X



T0535 FULL **\$269**

T0536 UPGRADE **\$149**

T0537 ACADEMIC* **\$185**

INTERNET SECURITY AND PC BACKUP



TREND MICRO PC-CILLIN INTERNET SECURITY PROFESSIONAL PACK 2006

Trend Micro PC-cillin Internet Security Professional Pack 2006 combines award-winning antivirus security including a personal firewall and Acronis Power Utilities.

Trend Micro PC-cillin Internet Security stops and removes spyware, protects against phishing fraud, and blocks spam. Plus, it guards your wireless network by alerting you when an intruder uses your Wi-Fi connection.

Acronis Power Utilities includes:

- Acronis Privacy Expert 8.0
- Acronis Migrate Easy 7.0
- Acronis Disk Editor 6.0
- Acronis Recovery Expert

¹ Bonus \$50 iTunes music card via redemption from Manacomm. Offer available from 10/03/06 until 31/05/06 with the purchase of Trend Micro PC-cillin Internet Security Professional Pack 2006 only. See box for details or visit manacomm.ht.com.au. Standard postage fees apply.

T6029

\$139

DELIVERY ONLY These products are for delivery only. Delivery charges apply. See page 63 for details

ACRONIS TRUE IMAGE V9



- Create an exact copy of your PC for a full backup
- Backup and restore specific files and folders
- Instantly restore the entire disk - no reinstallation required!
- Schedule backups automatically
- Lightning-speed restores with the new, exclusive Acronis Snap Restore

T6030 **\$75**

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

MIND YOUR OWN BUSINESS. SMARTER.

MYOB PREMIER 9



MYOB Premier is for businesses that need to streamline accounts procedures, whether through simplifying complex inventory issues, running an automated payroll, time billing, accessing advanced reporting or increasing productivity with multi-user access. This product comes with 12 months software support and upgrades.

R9228 **\$1,369**

MYOB ACCOUNTING 15



MYOB Accounting is for businesses that need to streamline accounts procedures and would benefit from improved inventory management, better management of customer and supplier relationships and advanced business reporting.

R9042 FULL **\$295**

R9441 UPGRADE **\$239**

MYOB ACCOUNTING PLUS 15



MYOB Accounting Plus comes with an award winning integrated payroll, is the ideal single-user business management tool and is a great accounting solution for smaller employers. MYOB Accounting Plus also makes it easy to track and charge for your time, and provides access to powerful profit-building information about your business.

R9227 FULL **\$489**

R9442 UPGRADE **\$319**

¹ Purchases made on or after 19 April 2006 are eligible for Buyer Protection. MYOB will provide a free upgrade to the latest 2006/07 version upon its release.

BACKUP YOUR CRITICAL DATA

- User initiated restore add-on
- Single-write multiple read backups to disk
- Automated windows client deployment
- Improved exchange and SQL support

ADD-ON PRODUCTS:

- Exchange Server Agent
- SQL Server Agent
- User initiated restores
- Open file backup
- Disaster recovery
- ADD-ON VALUE PACK (includes all add-ons)

***CALL 1300 13 9999
FOR LATEST PRICING**

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



RETROSPECT PROFESSIONAL 7.5

T5156 **\$169**



These products are for delivery only. Delivery charges apply. See page 63 for details.

EMC Insignia® Retrospect® 7.5 for Windows provides complete protection for file servers, desktops, notebooks, and business-critical applications.

RETROSPECT PROFESSIONAL - Designed for home and small office users who want to protect a single Windows computer and up to two additional networked Windows, Macintosh or Linux desktops and laptops.

RETROSPECT DISK-TO-DISK - Backup and restore a single Windows server to disk, CD or DVD.

RETROSPECT SINGLE SERVER - Designed for small or mid size businesses with a single Windows server. Runs on Windows server and includes unlimited client licenses to protect networked desktops and laptops running Windows, Mac, Linux, Novell Netware and Solaris.

RETROSPECT SMALL BUSINESS SERVER* - Backup and restore a single Windows Small Business Server, as well as networked desktops and laptops running Windows, Mac, Linux, Novell Netware and Solaris. Standard Edition includes an Exchange Server Agent and Disaster Recovery for the server while the Premium Edition includes all the above plus an SQL Server Agent.

RETROSPECT MULTI SERVER* - Ideal for a network with multiple Windows servers. Also includes unlimited client licenses to protect networked servers, desktops and laptops running Windows, Mac, Linux, Netware and Solaris.

RETROSPECT SINGLE SERVER 7.5

T5157 **\$1099**





ADOBE DESKTOP AND WEBSITE PUBLISHING

ADOBE DESIGN BUNDLE

The Adobe® Design Bundle offers the unified design environment of Adobe Creative Suite 2 Premium software with Flash® Professional 8 software, the industry's choice for creating advanced interactive content. Now with one package, you can design, develop, manage, and deliver a consistent experience — using industry standards such as Adobe PDF and Flash format — to millions of people around the world in print, on the web, and on mobile devices.

Includes:

- Adobe Photoshop® CS2
- Adobe Illustrator® CS2
- Adobe InDesign® CS2
- Adobe GoLive® CS2
- Adobe Acrobat® 7.0 Professional
- Version Cue® CS2
- Adobe Bridge
- Adobe Stock Photos
- Flash Professional 8

To upgrade successfully, you will need an earlier licensed version of Adobe Creative Suite Standard or Premium on the same platform as this purchase.



T4080 WIN



\$2,399

T4081 MAC



\$2,429

T4084 UPGRADE - WIN



\$1,549

T4085 UPGRADE- MAC



\$1,549

ADOBE WEB BUNDLE

The Adobe® Web Bundle offers Studio 8, the essential solution for web design and development, with the unified design environment of Adobe Creative Suite 2 Premium software. Now with one package, you can design, develop, manage, and maintain rich, interactive experiences for easy delivery to millions of viewers on the web, on mobile devices, and in print using industry standards such as Flash® format and Adobe PDF.

Includes:

- Adobe Photoshop® CS2
- Adobe Illustrator® CS2
- Adobe InDesign® CS2
- Adobe GoLive® CS2
- Adobe Acrobat® 7.0 Professional
- Version Cue® CS2
- Adobe Bridge
- Adobe Stock Photos

Studio 8

Combines full versions of:

- Dreamweaver® 8
- Flash Professional 8
- Fireworks® 8
- Contribute™ 3
- FlashPaper™ 2

To upgrade successfully, you will need Adobe Creative Suite 1.x Standard or Premium and Macromedia Studio MX or Studio MX 2004 on the same platform as this purchase.



T4082 WIN



\$2,899

T4083 MAC



\$2,899

T4086 UPGRADE - WIN



\$1,469

T4087 UPGRADE- MAC



\$1,469



These products are for delivery only. Delivery charges apply. See page 63 for details.

ACADEMIC WEB BUNDLE



- Adobe Web Bundle offers Studio 8, the essential solution for web design and development, with the unified design environment of Adobe CS2 Premium
- Design, develop, manage and maintain rich, interactive experiences for easy delivery to viewers on the web, on mobile devices and in print using Flash format and Adobe PDF
- Adobe Creative Suite Premium combines full versions of Adobe Photoshop CS2, Adobe Illustrator CS2, Adobe InDesign CS2, Adobe GoLive CS2, Adobe Acrobat 7.0 Pro, Version Cue CS2, Adobe Bridge and Adobe Stock Photos
- Studio 8 combines full versions of DreamWeaver 8, Flash Pro, Fireworks 8, Contribute 3 and FlashPaper 2

For academic eligibility please visit: <http://www.adobe.com/education/purchasing/qualify.html>

T4337 WIN



\$879

T4336 MAC



\$879

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



WINDOWS XP WITH SERVICE PACK 2 PRICE DROPS!

WINDOWS SERVER R2



Windows Server 2003 R2 extends the Windows Server 2003 operating system, providing a more efficient way to manage and control access to local and remote resources while easily integrating into your existing Windows Server 2003 environment. Windows Server 2003 R2 provides a scalable, security-enhanced Web platform and enables new scenarios including simplified branch server management, improved identity and access management, and more efficient storage management. This page provides an overview of benefits, new features, and improvements in Windows Server 2003 R2.

BENEFITS

Building upon the increased security, reliability, and performance provided by Windows Server 2003 Service Pack 1 (SP1), Windows Server 2003 R2 extends connectivity and control to local and remote resources. Organisations can benefit from reduced costs and increased efficiencies gained through enhanced management and control over resources across the enterprise.

AVAILABLE NOW!

For more information and pricing call 1300 13 9999.

* For non commercial use. Must be a Qualified Education User. For eligibility criteria visit: <http://www.microsoft.com/australia/education/howtobuy/meud/default.aspx>.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

WINDOWS XP SERVICE PACK 2 WITH ADVANCED SECURITY TECHNOLOGIES

Service Packs offer convenient, all-in-one access to the most up-to-date drivers, tools, security enhancements, and other critical updates. The latest service pack for Windows XP - Service Pack 2 (SP2) - is all about security improvements, and it's one of the most important service packs ever released.

XP SERVICE PACK 2 BENEFITS INCLUDE:

- **Take more control with Windows Security Centre** - here you can check your Windows Firewall, AV Software and Windows Security updates easily in the one location.
- **Help protect your PC with the NEW Windows Firewall** - a Firewall helps you to guard against unwanted attack on your PC when you are connected to the Internet.
- **Block distracting pop-ups in Microsoft Internet Explorer** - now you have the option to reduce unwanted advertising and content and stop wasted bandwidth by blocking unwanted advertising pop-ups.
- **Attachment Manager** - helps protect against viruses that can spread through E-Mail, Windows Messenger and Internet Explorer by identifying potentially unsafe attachments.
- **Bluetooth Hardware Support** - Bluetooth is the latest in Wireless technology that enables you to link your PC with the latest Bluetooth-enabled wireless devices, including keyboards, mice, printers and mobile phones.

WINDOWS XP HOME - WITH SERVICE PACK 2 INCLUDED



- **The most dependable Windows operating system yet**
Windows XP sets the standard in efficient computing with a new visual design, the reliable Windows engine, and Internet security features.
- **Handle digital media like a pro**
Transferring footage to your computer is faster and editing is easier than ever, with everything you need to create, edit, and share your home movies.
- **Get connected**
Windows XP has built-in Internet, home networking, and real-time voice, video, and instant messaging support. Publish pictures to a Web site or shop online.
- **Use Remote Assistance to solve problems**
Invite a friend or support professional to connect to your PC over the Internet to fix a problem or answer a question.

WINDOWS XP PROFESSIONAL - WITH SERVICE PACK 2 INCLUDED



- **Added features**
The Professional Edition adds security and privacy, advanced recovery options, improved network connections, and more to the features of Home Edition.
- **Superior mobile support**
Work offline or access your computer remotely with ease with wireless networking support, configuration wizards, improved power management and more.
- **Greater security**
Encrypt your files and folders with the highest levels of protection from hackers and data theft, and connect to Virtual Private Networks securely.
- **Integrated and current**
Integrate with Windows Servers and management solutions and keep your system current with automatic Windows Update.

Q0447	FULL	\$449
Q0452	FULL	\$299
Q0455	UPGRADE	\$135
Q0458	UPGRADE	\$289
Q0459	UPGRADE - ACADEMIC*	\$110

SAVE \$24

SAVE \$

MICROSOFT OFFICE

MICROSOFT PROFESSIONAL EDITION 2003 ACADEMIC

Microsoft Office Professional Edition 2003 can help you and your organisation communicate information with immediacy and impact. New and familiar programs and improved functionality help you build powerful connections between people, information, and business processes.

L0803	ACADEMIC	\$255
L0805	UPGRADE	\$515
L0804	PROFESSIONAL FULL	\$779

OFFICE SMALL BUSINESS 2003 UPGRADE

Microsoft Office Small Business Edition 2003 is a personal and business productivity solution that enables small-business employees to:

- More effectively manage customers and sales opportunities
- Create impressive sales and marketing materials
- Manage e-mail and share information efficiently and securely

L0827	UPGRADE	\$429
L0826	FULL	\$679

OFFICE STUDENT & TEACHER EDITION 2003[#]

Microsoft Office Student & Teacher Edition 2003 enables you to complete your document-related tasks easily, and allows you and your family to gain the familiarity and skills that will keep each of you ahead of the curve at school and at work.

Offered at the best prices for home users – Office 2003 Student & Teacher Edition includes full versions of Office products (Word, Excel, PowerPoint and Outlook 2003).

L0802	STUDENT & TEACHER [#]	\$219
L0800	OFFICE STANDARD	\$629
L0801	OFFICE STANDARD UPGRADE	\$385

MICROSOFT OFFICE MAC 2004 STUDENT TEACHER EDITION



PRICE DROP

Office 2004 for Mac Student and Teacher Edition gives you all the leading presentation, spreadsheet, word processing, and e-mail software found in Office 2004 for Mac.

N6773 STUD/TEACH [#]	\$189
N6771 STANDARD 	\$469
Q0422 PRO	\$575

Small Business +



For tips and tricks on how to grow your small business, visit **Small Business +** - our new website designed by experts and packed with ideas on moving your business forward - including how to get new customers and impress your current ones, market yourself more effectively and balance your budget. There's also a 24-hour product support centre and training modules for everyone in your operation. Keep up-to-date and give your business a boost with Small Business +. Sign up today.

www.microsoft.com.au/sbplus

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

[#]For non commercial use. Must be a Qualified Education User. For eligibility criteria visit: www.microsoft.com/australia/education/howtobuy/meud/default.aspx

These products are for delivery only. Delivery charges apply. See page 63 for details.

PRODUCTIVITY APPLICATIONS

MICROSOFT INFOPATH 2003



Gather information flexibly and efficiently in rich, dynamic forms and more effectively share, reuse, and repurpose information throughout your team or organisation. InfoPath 2003 helps improve collaboration and decision-making to positively impact your business.

L0829 FULL **\$329**L0830 ACADEMIC* **\$149**

MICROSOFT ONENOTE 2003



OneNote 2003 is a new program in the Microsoft Office System that enables you to capture, organise, and reuse your notes on laptop computers, desktop computers, or Tablet PCs.

L0906 FULL **\$149**L0907 ACADEMIC* **\$79**

*For non commercial use. Must be a Qualified Education User. For eligibility criteria visit: <http://www.microsoft.com/australia/education/howtobuy/meud/default.aspx>.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

MICROSOFT PUBLISHER 2003



Keeping in touch and communicating with customers is essential for any business. A complete business publishing and marketing materials solution, Publisher 2003 can help you reach out to customers. With Publisher 2003, it's easier than ever to design, create, and publish professional marketing and communication materials in-house.

L0820 FULL **\$275**L0821 UPGRADE **\$159**L0822 ACADEMIC* **\$145**

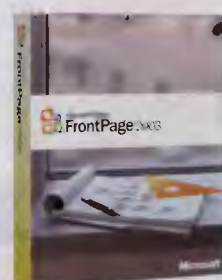
MICROSOFT VISIO STANDARD 2003



- Easily assemble diagrams by dragging pre-defined Microsoft SmartShapes symbols
- Use tools designed for specific professional disciplines for business & technical diagramming requirements throughout the organisation
- Generate common diagram types from existing data

L1540 FULL **\$329**L1542 UPGRADE **\$165**L1546 ACADEMIC* **\$99**

MICROSOFT FRONTPAGE 2003



FrontPage 2003 provides the features, flexibility, and functionality to help you build better websites. It includes the professional design, authoring, data, and publishing tools needed to create dynamic and sophisticated websites.

L0812 FULL **\$325**L0813 UPGRADE **\$169**L0814 ACADEMIC* **\$149**

MICROSOFT PROJECT STANDARD 2003



Microsoft Office Project Standard 2003 is used by project managers who need a desktop tool to manage their projects independently but who do not require strong coordination with other project managers or the ability to manage resources from a central repository.

L3553 FULL **\$975**L3554 UPGRADE **\$567**L3231 ACADEMIC* **\$107**

These products are for delivery only. Delivery charges apply. See page 63 for details.



harristechnology



Software

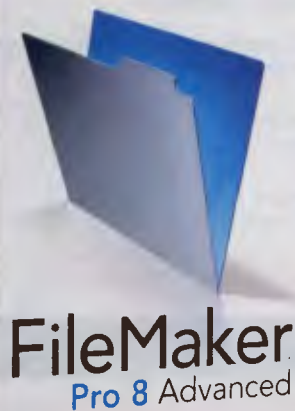
EFFORTLESSLY MANAGES ALL YOUR INFORMATION

FILEMAKER PRO 8 ADVANCED

FileMaker Pro 8 Advanced replaces FileMaker Developer and has all the features of FileMaker Pro 8 plus advanced development and customisation tools so you can efficiently build more powerful, more customised databases!

With the ability to customise menus and add Tooltips, as well as robust troubleshooting and database analysis tools, FileMaker Pro 8 Advanced provides powerful tools to:

- Add custom menus
- Add custom tooltips
- Import multiple tables at once
- Test scripts without modifying your database
- Create standalone runtime applications
- Create kiosk-based applications
- Build more robust calculations with custom functions
- Generate a report that provides an overview of your database schema



FileMaker Pro 8 Advanced

S8604

\$845

SPECIAL OFFER!

Until June 30 2006, FileMaker Pro 6 through 8 customers are eligible to upgrade to FileMaker Pro 8 Advanced for only **\$519**. For further information visit filemaker.ht.com.au



FileMaker Pro 8 Advanced

FILEMAKER PRO 8
WORK FASTER. SHARE MORE.

FileMaker Pro 8 is the best FileMaker ever! Work significantly faster and share information with more people and programs than ever before with this exciting new FileMaker upgrade.

It includes breakthroughs in sharing with Adobe Acrobat and Microsoft Office, as well as new features designed to help you work faster every day.

New features include the ability to:

- Create Adobe PDF files
- Create Microsoft Excel files
- Email the contents of any field instantly
- Search databases easier
- Import tables easily
- Perform email merges
- Create cleaner looking database layouts
- Document databases better
- Build layouts with multiple tabs
- And many more time-saving features, including automatic field completion, integrated spell checker, and new development features!

FileMaker Pro 8
Manage people, projects, assets, and more - the easy way!

S8597

\$459

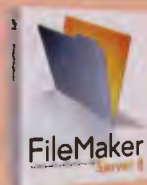
These products are for pick up or delivery only. Delivery charges apply. See page 63 for details.

FILEMAKER
SERVER 8

FileMaker Server 8 is high performance server software for teams of FileMaker users who want to maximise the performance and security of their shared databases while automating backups and other administrative tasks.

FileMaker Server 8 includes robust, real-time database sharing, advanced security options and powerful remote administration capabilities.

T0640

\$1,689

FileMaker Server 8

FILEMAKER
MOBILE 8

FileMaker Mobile 8 is a companion to FileMaker Pro 8, designed specifically for Palm OS and Pocket PC handhelds, so you can easily extend your desktop to mobile individuals and workgroups.

T3838

\$109

FileMaker Mobile 8

FILEMAKER
SERVER 8
ADVANCED

FileMaker Server 8 Advanced is high performance server software that takes full advantage of the new FileMaker Pro 8 features while increasing reliability and maximising database performance.

With more than 50 core improvements to the FileMaker Server 8 engine, you'll experience increased reliability and stability of your FileMaker solutions. In addition, the engine has been optimised to perform key tasks faster.

T4381

\$4,231

FileMaker Server 8 Advanced

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

Quicken

INTRODUCING THE NEW QUICKBOOKS 2006/07 RANGE



Quicken Advantage has been designed so that your focus remains on your business, and not your business software. We enable this by giving you the tools to keep you on top of your software needs.

The key benefits of membership include:

- **Unlimited weekday technical support**
- **All Upgrades** sent to you upon release at no additional cost
- **Dedicated Advantage contact numbers** to help you stay in touch with Quicken or access our specialised Advantage Technical Support team
- **A personal email** as soon as any software updates are available so you can download them directly from the web
- Your own **personalised website** via www.quicken.com.au with the latest information and updates, to make running your business Quicken.Easy
- Quarterly **Advantage Newsletter** by e-mail
- Special **training offers**

^A Please note that terms and conditions apply to the Quicken Advantage Membership Program.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.



QUICKBOOKS PLUS 2006/07

QuickBooks Plus is perfect for small businesses with employees - it includes integrated payroll and inventory management.

- Invoice, pay bills and track expenses
- Process credit card statements
- Track Inventory
- Integrated Payroll management
- Integrated BAS and online lodgment

BONUS 12 months Technical support and upgrades

T6294 FULL

\$499

T6295 UPGRADE

\$355

QUICKBOOKS PROFESSIONAL 2006/07

QuickBooks Pro has all the tools for a professional business, with Microsoft Office integration, designed templates, estimates and job costing - see which projects are making money.

- Process credit card statements
- Integrated payroll management
- Time billing and job costing
- Integration with Microsoft Office
- Multi User Enabled

BONUS 12 months Technical support and upgrades

T6297 FULL

\$729

T6298 UPGRADE

\$455

QUICKBOOKS PREMIER 2006/07

The multi user solution - QuickBooks Premier is for 2 to 5 users and has industry-specific versions tailored to your needs.

- Time billing and job costing
- Integration with Microsoft Office
- Multiple currency
- Up to 5 simultaneous users
- Industry specific versions

BONUS 12 months Technical support and upgrades

T6300 FULL

\$1,519

T6301 UPGRADE

\$728

Quicken

harristechnology



Software

INTRODUCING THE NEW QUICKBOOKS 2006/07 RANGE



QUICKBOOKS ACCOUNTING 2006/07

With powerful reporting and an integrated BAS, QuickBooks Accounting is the solution for small business.

- Integrated BAS
- Import bank statements
- Process credit card statements
- Track GST and prepare BAS
- Audit Company File wizard – maintain data integrity

BONUS 12 months Technical support and upgrades

T6293

\$229



QUICKBOOKS EASYSTART 2006/07

Ideal for new or very small businesses, QuickBooks EasyStart is the simplest way to manage sales, expenses and customers.

- Track Sales and Expenses
- Manage GST and BAS
- Personalise customer invoices with your company logo
- Reconcile your bank account
- Extensive help menu available from within the software program

T6292

\$99



RETAIL STARTER KIT 2006/07

- For complete point of sale and back office management - Retail Starter Kit includes everything you need to get started.
- QuickBooks Plus 2006/07; Retail Point of Sale 2006/07; receipt printer; cash drawer; barcode scanner
- Includes 12 months access to Quicken Advantage - receive free technical support, and product updates and upgrades when they're released
- Combines the new features of QB Plus and Retail POS

BONUS 12 months Technical support and upgrades

T6305

\$929

QUICKEN HOME AND BUSINESS 2005/06



Quicken Home and Business 2005/06 combines the best of investing and basic business cash flow management to assist you in combining your personal and business finances, allowing you to obtain a complete picture of your financial wealth. It is designed specifically for businesses that operate using a cash-basis accounting method and do not require reporting on outstanding invoices.

S9581 FULL **\$369**

S9582 UPGRADE **\$137**

QUICKEN PERSONAL PLUS 2006



Quicken Personal Plus 2006 provides tools to help you manage your finances, prepare for tax time and plan for the future. Personal 2006 is for those individuals who want to actively participate in the management of their personal finances. It is for those people who want their budgeting and planning to be more straight forward and simple.

T0937 **\$145**

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

SCANSOFT IMAGING SOLUTIONS

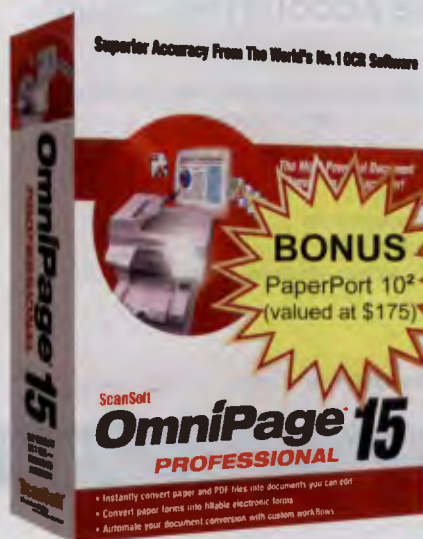
PDF CREATE! 3



ScanSoft PDF Create! is the fast, reliable and affordable way to turn all of your PC documents, drawings and images into industry-standard PDF files. Instantly create PDF documents that are compact and easy to e-mail, can be universally viewed on the Web, and that print just as if they came from the original application.

S1875 FULL **\$85**

¹ Cashback offer via redemption from Nuance. Offer valid until 30 June 2006. See nuance.ht.com.au for more details. Standard postage fees apply.



OMNIPAGE PROFESSIONAL 15

OmniPage 15 is the most precise way to convert paper and PDF files into your favourite PC applications. Powerful new OCR technology, advanced layout analysis and intuitive editing tools allow you to quickly turn paper and PDF files into editable electronic documents that look just like the original – complete with text, tables and graphics. Its improved speed and intuitive proofing combine to make document conversion faster and easier than you could imagine.

- Save time and effort with unmatched OCR accuracy
- Maintain perfect formatting - converted documents look exactly like the original
- Improve poor quality documents - Scan Enhancement Tools (SET) improve the quality of scanned documents, faxes and poor quality copies.

² Via redemption from Nuance. Redemption offer also valid with purchase of OmniPage Standard 15. See nuance.ht.com.au for details. Standard postage fees apply.

S8698 FULL

\$84

S8700 UPGRADE

\$335

REVOLUTIONISE EXCEL SPREADSHEETS

CRYSTAL REPORTS STANDARD 11

Crystal Reports can help you create flexible, high-fidelity reports and tightly integrate them into applications. Learn how the features make it a world standard for enterprise reporting.

R6067 **\$305**

CRYSTAL REPORTS PROFESSIONAL 11

The world standard for report creation just got better. Crystal Reports XI Professional offers a host of new features with a flexible enterprise report design environment for creating highly formatted reports.

R6068 **\$769**

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

CRYSTAL XCELSIUS

You've never seen a spreadsheet do this before.

Revolutionise Excel spreadsheets with the award-winning Crystal Xcelsius.

Point and click to create engaging business presentations filled with dynamic charts, vibrant graphs, and interactive visual analytics. Use visual modeling to analyse multiple 'what-if' scenarios and peek into your company's potential financial future. Communicate results to colleagues with one-click integration into PowerPoint, Outlook, PDFs, and the web. Steal the show and see your business in a new light.

Download a free trial at businessobjects.com/cx

Register for a free web seminar at businessobjects.com/anz/crystal_xcelsius

T5625 PROFESSIONAL **\$785**

T5624 STANDARD **\$311**



These products are for delivery only. Delivery charges apply. See page 63 for details



VALUE PACKED BUNDLE

NORTON INTERNET SECURITY 2006 / NORTON GHOST 10.0 BUNDLE + LOGITECH USB HEADSET



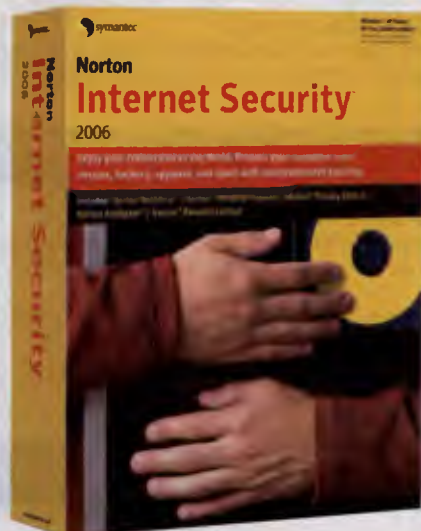
Enjoy your connection to the world plus save the things you care about. Norton Internet Security 2006 protects your computer from viruses, hackers, spyware and spam with comprehensive security.

Plus save the stuff you care about with the new Norton Ghost. From photos and music to tax documents, Norton Ghost 10.0 automatically backs up and recovers everything on your computer. Reliable, efficient, and versatile, Norton Ghost optimises backup space, works with a wide range of media devices, and brings back your entire system in a few short steps.

Headset valued at \$68.

T5678 BUNDLE PRICE

\$119



NORTON INTERNET SECURITY 2006

Enjoy your connection to the world. Norton Internet Security™ 2006 gives you the confidence to travel the Internet like never before. A comprehensive set of award-winning tools, Norton Internet Security automatically blocks hackers, viruses, and spyware. It filters out phishing email and spam, while its privacy and parental controls protect your personal information and shield your children from harm. And should your operating system or browser have a security hole, Norton Internet Security is there to handle resulting attacks. With all these tools working for you, you're free to get connected, stay connected, and use the Internet however you want.

T0683 SINGLE USER

\$89

T0690 3 USER

\$169

NORTON SYSTEMWORKS 2006 PREMIER



This powerful solution offers advanced protection, automatically backing up everything on your computer. It also prevents many problems, keeping your computer healthy and protected against viruses and dangerous spyware. And when trouble does occur, it's there to help you repair and recover.

T0882 FULL

\$119

T0885 5 USER

\$235

NORTON ANTIVIRUS 2006



- New! Norton Protection Center
- New! Proactively blocks Home Page hijacking spyware, for improved protection that does not require definition updates
- New and Improved! Automatically handles removal of all kinds of malicious programs, including Spyware

T0594 FULL

\$56

T0598 ACADEMIC

\$55

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

WHAT TODAY'S CAD DESIGNERS WANT

STUDENT EDITION#
DESIGNED FOR
PROFESSIONALS,
PRICED FOR
STUDENTS

MANUFACTURING SERIES



- Autodesk Inventor
- Autodesk Mechanical Desktop
- AutoCAD Mechanical
- AutoCAD (included as part of AutoCAD Mechanical)

R7574  **\$265***

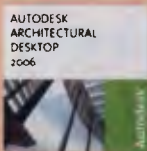
REVIT SERIES



- Autodesk Revit
- AutoCAD

S5370  **\$265***

BUILDING SERIES



- Autodesk Architectural Desktop
- AutoCAD (included as part of Autodesk Architectural Desktop)

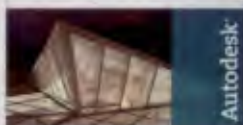
R7575  **\$265***

Autocad, Autodesk Civil 3D and Autodesk VIZ student versions also available separately.

#Proof of valid student status (of the purchaser) must be provided in order to qualify for this pricing.

PLEASE NOTE:

All purchases subject to terms & conditions and returns policy. Delivery charges may apply. Not all items stocked in store but available for pick-up/delivery.

AutoCAD®
2007AutoCAD LT®
2007AUTODESK®
DWF™ COMPOSER

AutoSketch 9



AUTOCAD® 2007

Design, visualise, and document your ideas clearly and efficiently with AutoCAD software. From conceptual design through drafting and detailing, AutoCAD 2007 enables you to explore ideas like never before. Create, edit, and develop design alternatives using realistic solids and surfaces in an updated design environment. Communicate your ideas with powerful sketch, shadow, and rendering tools, including intuitive walk-through animations. Then turn your concepts into a set of documents with the new section and flatten functionality. It's all here, whether you're creating, exploring, managing, or communicating. AutoCAD keeps you on time, on budget, and on track.

T6087

**\$6,879**

AUTOCAD LT® 2007

Enhance your productivity with AutoCAD LT software, the world's number one-selling drafting and detailing product. AutoCAD LT 2007 is better than ever. Blocks are now dynamic, Express Tools for better layer management were added, and drafting enhancements abound. Now the tasks you perform every day are streamlined with just one thing in mind—boosting productivity. With full DWG file format compatibility, and access to attached drawings, you've never experienced a more efficient design process.

T6088 FULL

\$2,065

T6089 UPGRADE

\$847

AUTODESK DWF COMPOSER V2

Accelerate design reviews with Autodesk DWF™ Composer, the all-digital way to review, mark up, and revise 2D and 3D designs. View and print DWG and DWF™ files with accuracy and fidelity, then measure and annotate the DWF files before round-tripping the markups for revisions. Cycle times, errors, and costs will shrink. Efficiency, however, will soar.

S0481 FULL

**\$349**

S9537 UPGRADE

**\$188**

AUTOSKETCH® 9

AutoSketch 9 software provides a comprehensive set of CAD tools for creating precision drawings - from electrical details to floor plans, from conceptual sketches to product specifications, and much more.

AutoSketch 9 provides: • Comprehensive CAD tools for creating expert-quality drawings • Straightforward drafting in a Windows XP-like environment • Tutorials and wizards for a fast start

P7266

\$229

AUTODESK SYMBOLS 2000

A comprehensive library of Autodesk Symbols covering both Architectural and Engineering services. Simply drag and drop from a toolbar-style graphical interface directly into your AutoCAD drawings.

Autodesk Symbols 2000 Architectural - Contains over 5,600 symbols for building design and documentation.

Autodesk Symbols 2000 Engineering - Contains over 10,800 symbols covering all aspects of Engineering.

ARCHITECTURAL

A1319

**\$207**

ENGINEERING

A1320

**\$207**

These products are for delivery only. Delivery charges apply. See page 63 for details.

SERVICES

SERVICES



ON-SITE INSTALLATION OF STANDALONE DESKTOP/NOTEBOOK (1 hour service)

This service provides for the on-site unpacking, setup and configuration of a single desktop or notebook PC and those external peripherals such as a printer or scanner which were purchased along with the desktop or notebook PC from Harris Technology. Service performed will include the configuration of internet access and setting up an E-Mail account as per the customer provided details. Services include brief training on the features of the desktop or notebook, how to avoid viruses and how to perform a system restore/recovery.

Product Code: HT018

Part Number: M4290

Price: \$99

EXTERNAL PERIPHERAL INSTALLATION AND SETUP (1 hour service)

This service provides for the on-site unpacking, setup and configuration of external peripheral devices such as printers or scanners which are purchased from Harris Technology. Services performed include the installation of the peripherals associated software onto a desktop or notebook PC. Once the installation has been completed, and subject to time availability, the consultant will demonstrate the peripheral's functionality by stepping through the manufacturer's manual generating samples and/or examples of the products operations. They will also briefly cover the various 'troubleshooting' options available either through the manufacturer's manual, website (internet access required) or Help Desk, and the steps required to make a warranty claim in the event of a breakdown.

Product Code: HT064

Part Number: M4296

Price: \$99

NETWORK PC INSTALL (1 hour service)

This service provides for a service consultant to unpacking, setup and configure one desktop or notebook PC so that desktop or notebook PC can successfully access the resources of the existing network. The service includes configuration of internet access and an E-Mail account provided the customer has the necessary configuration details. Once the installation has been completed, and subject to time availability, the consultant will demonstrate the PC's functionality by stepping through the manufacturer's manual generating samples and/or examples of the products operations. They will also briefly cover the manufacturer's manual, website (internet access required) or Help Desk, and the steps required to make a warranty claim in the event of a breakdown.

Product Code: HT019

Part Number: M4652

Price: \$124

HARRIS TECHNOLOGY TERMS AND CONDITIONS

PRICING

All purchases are subject to Harris Technology's Terms and Conditions and Returns Policy which can be found at ht.com.au.

Prices in this catalogue include GST but exclude delivery charges.

Display accessories shown in photographs throughout this publication are not included in the price.

All items in this publication have been included in good faith on the basis that the goods will be available at the time of sale. A failure by a supplier to deliver in accordance with sample, description, or at all, may result in some lines being unavailable.

We reserve the right to limit supply (excluding SA)

While every care has been taken to ensure accuracy in this catalogue, we reserve the right to change incorrect prices resulting from a printing or typographical error.

Harris Technology publishes price changes and any other important corrections regarding this catalogue both on its website ht.com.au, through notices in store and and by public notice in The Australian at the earliest opportunity.

ORDERING & DELIVERY

Orders can be collected from one of our locations or delivered, anywhere Australia wide. Delivery charges applicable. Delivery times quoted by sales staff are our best estimates based on information received from the manufacturers. Please inquire about all delivery charges as they vary for locations and items purchased.

Please call us on
1300 13 9999
or visit ht.com.au for an
accurate freight quote
based on your order

*RENTSMART

The figures quoted are based on a per week basis over 3 years. Standard rents smart terms and conditions apply. For details see rentsmart.ht.com.au



Some items in this catalogue are for delivery only. Delivery charges apply. Call 1300 13 9999 or visit delivery.ht.com.au for details.



**3 WAYS TO
SHOP**

**CALL
1300 13 9999**

**CLICK
ht.com.au**

**VISIT
see back for
details**

harris technology

EXCLUSIVE TO HARRIS TECHNOLOGY

MAY BONUS

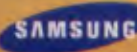
250 SHEET PAPER TRAY

Valued at \$179!†

†Available 01/05/06 - 31/05/06

Samsung ML-2250 Mono Laser Printer

- Up to 20 pages per minute
- Up to 1200 dpi resolution
- 2 years warranty

Q1969 | **\$339** 



*May bonus offer available from 01/05/06 till 31/05/06. See samsung.ht.com.au for more details.

OUR LOCATIONS

NSW

NORTH RYDE

45 Epping Road
North Ryde NSW 2113

NORTH SYDNEY

Ground Floor Bayer Building
275 Alfred Street North
North Sydney NSW 2060

PARRAMATTA

46 George Street
Parramatta NSW 2150

ALEXANDRIA

Unit 1, 110 Botany Road
Alexandria NSW 2015

VIC

HAWTHORN EAST

612 Burwood Road
Hawthorn East VIC 3123

ACT

FYSHWICK

29-31 Townsville Street
Fyshwick ACT 2609

QLD

FORTITUDE VALLEY

356 St Pauls Terrace
Fortitude Valley QLD 4006

WA

OSBORNE PARK

426 Scarborough Beach
Osborne Park WA 6017



Harris Technology Pty Ltd ABN 74-007-870-484
A member of the Coles Myer Ltd group



Available on selected purchases



Available on all purchases

CALL 1300 13 9999 | CLICK ht.com.au | VISIT see above for details

Some items in this catalogue are for delivery only. Delivery charges apply.

PCMCIA
**Sound
BLASTER**

CREATIVE

AUDIGY 2 ZS
Notebook

RECORDING

MUSIC

MOVIES

GAMES



7.1

Sound Blaster
24-bit
192kHz/104dB SNR

PREMIUM SOUND BLASTER® QUALITY AUDIO FOR YOUR NOTEBOOK - AT HOME OR ON-THE-GO!

Sound Blaster® Audigy® 2 ZS Notebook delivers THX® certified audio playback, all in an ultra-portable PCMCIA card! 24-bit audio provides you with 256 times the clarity of your basic notebook sound so your CDs, MP3s and DVDs will sound better than ever before. You can also enjoy music, movies, and games in virtual surround over headphones or up to 7.1 surround sound with built-in Dolby® Digital EX and DTS-ES™ decoding. Sound effects in games become so realistic that you'll feel like you are actually in the middle of the action and you'll hear it all without compromising performance. You can also record your own music and audio samples in richer, cleaner 24-bit audio quality and create professional quality music anywhere.

Also Available:

7.1



Sound Blaster®
Audigy® 2 NX

Revolutionise your PC and
Notebook with
Premium 24-bit Sound

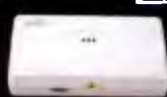
5.1



Sound Blaster®
Live! 24-bit External

The Easiest Upgrade from
Basic Built-In PC
Sound to HomeTheater Audio

2.1



Sound Blaster®
Digital Music LX

Improve the Digital Audio
in Your PC or Notebook
in One Step

- Plugs straight into your notebook's PCMCIA slot for THX® certified crystal clear 24-bit audio
- Listen to music, games and movies in virtual surround sound over headphones with CMSS™ 3D AudioTechnology
- Watch DVD-movies in 5.1 or 7.1 surround sound with built-in DTS-ES™ or Dolby® Digital EX decoding
- Experience ultra-realistic gameplay in 7.1 positional audio with EAX™ 4.0 ADVANCED HD™
- Record music in 24-bit audio quality with ASIO 2.0 and SoundFont® support and more...



pc world
RECOMMENDS

Australian
PC World
June 2005



PC Games
Addict
April 2005

For more information visit www.au.creative.com or call 02 9021 9800



▶ THERE'S A RISK YOU'LL MISS THE PERFECT FAMILY SHOT.
THERE SHOULD NEVER BE A RISK PRINTING IT.



2005.11.12



2005.11.12



2005.11.12

- ▶ That's why 71% of professional photographers choose Epson printers.*
- ▶ Thankfully Epson has a range of printers for absolutely everyone.
- ▶ Because everyone's prints deserve the world's best printers.

* According to research conducted by Taverne Research (Aust) August 2005